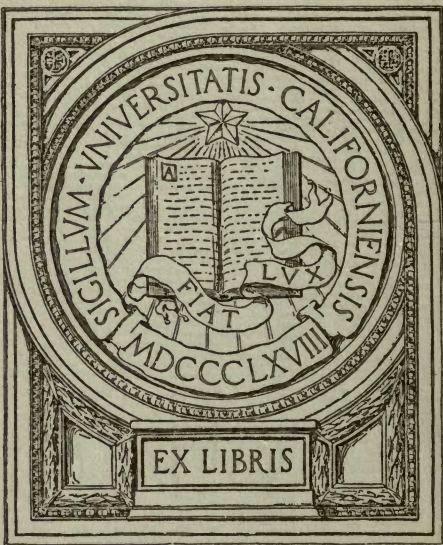


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FLORA

OF THE

Lackawanna and Wyoming
Valleys.

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No.

A CATALOGUE

OF THE

FLOWERING PLANTS

AND

VASCULAR CRYPTOGAMS,

FOUND IN AND NEAR

LACKAWANNA AND WYOMING VALLEYS,

BY

WILLIAM R. DUDLEY,
OF LELAND STANFORD, JR., UNIVERSITY,

AND

CHARLES O. THURSTON,
OF WYOMING SEMINARY.

1892.

WILKES-BARRE, PA. ;
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PREFACE.

In June, 1887, the Lackawanna Institute of Scranton published a "preliminary list" of the plants in the Lackawanna and Wyoming Valleys. The author, Prof. W. R. Dudley, then of Cornell University, brought together the results of his own collecting, and that of several local collectors, also Prof. Thomas C. Porter's discoveries on the adjacent mountains. This list, together with the interest aroused by the Institute during its summer school in 1889, under Prof. Dudley, made the present, far from complete, flora possible.

The territory included is the same as that of the preceding list, namely, the Lackawanna and Wyoming Valleys and the mountain ranges enclosing them. Localities are occasionally mentioned near to but outside these limits to stimulate our botanists, who may have access to them, to a more diligent search.

The catalogue has been prepared from the carefully kept notes of Prof. Dudley, made from his personal observations in 1889, 1890, and the autumn of 1891, combined with the results embodied in the printed list of 1887; from notes kindly sent him by Prof. T. C. Porter, of Lafayette College, the best authority on the plants of Pennsylvania; and from reports made to him by the different botanists in the valleys. Credit has been given each in the text, the single word "*Davis*" referring to Mr. R. N. Davis, of Archbald; "*Graves*," to Mr. W. R. Graves, of Scranton; "*Miss Carlson*," to Miss Eleanor Carlson, of West Pittston.

Plants quoted as "common," "abundant," or "frequent," are so quoted on the authority of these botanists, each in his own locality, aided by the general observations of Prof. Dudley.

The classification and nomenclature corresponds, in the main, to that of the *sixth edition of Gray's Manual*, to which students are directed for a full description of all plants growing without cultivation.

The few cultivated plants, noticed for the benefit of my classes, will be found described in *Gray's Field, Forest and Garden Botany*.

Although crowded with the work of his department at Cornell University, Prof. Dudley has taken the time to rewrite the families *Cistaceæ*, *Ericaceæ*, *Cupuliferæ*, *Salicaceæ*, *Juncaceæ*, *Cyperaceæ* and *Gramineæ*.

He has also read my manuscript upon the other families and given me much valuable assistance and advice.

The present flora is but a "report of progress" preliminary to a COMPLETE FLORA, which will be published as soon as the territory is carefully worked up so that such a flora is possible. To make this work easier the present edition has been made a pocket flora, suitable for field work. Alternate leaves have been left blank for notes and the species have been numbered. The plants believed to be native are printed in bold-faced type, while introduced plants are printed in small capitals.

The discovery of a new plant or of a new locality for a plant not marked "common," "abundant" or "frequent," should be carefully noted on the blank leaf opposite the genus to which it belongs, with date, locality, its abundance, and any other valuable or interesting facts.

Specimens should be pressed, and preserved either in your own or your school herbarium, and a duplicate sent either to the Lackawanna Institute at Scranton, to Wyoming Seminary at Kingston, or to the West Pittston High School. Credit for all such discoveries will be given in the complete flora when published.

Much remains to be done, especially among the aquatic plants of our ponds, marshes and streams. Our summary shows that less than a thousand species of plants are known to grow without cultivation in our territory; the total should be at least two hundred larger.

Many plants believed to be common, as *Thalictrum polygamum*, are reported from Wyoming Valley alone, others are reported from Lackawanna Valley only.

Such plants can be easily worked up by beginners, while the more advanced students should form botany clubs, and the work should be given out by families; in this way more rapid advancement can be made both in our knowledge of the flora and in the botanical knowledge of the student.

Among the many places, mentioned by the teachers and botanists of the valleys, as especially worthy of a visit, are the Archbald "pot-holes" and White Oak Creek, both near Archbald; Elk Mt., northwest of Carbondale; Bald Mt., easily reached from Scranton; Campbell's Ledge, and Falling Spring, near West Pittston; the Ice Cave Gorge above Luzerne; Tilbury Knob, opposite Nanticoke; Penobscot Knob, its summit and southern ledges; the lake east of Glen Summit; Lehigh Pond; Lake Henry; Sink-hole Marsh, Ararat; and the pond opposite Duryea. It might be added that a visit to any pond, marsh or mountain

will always repay the botanist, while the Pocono Plateau is especially interesting on account of the many northern plants found there.

Hearty thanks are due the different botanists who have helped by their contributions to make this catalogue as complete as possible, and whose names occur so frequently in the following pages. I am also indebted to the liberal management of Wyoming Seminary, whose financial aid made the publication of this flora possible. Personally I am especially indebted to Prof. W. R. Dudley, of Leland Stanford, Jr., University, whose advice and assistance have been such that all merit that the flora may have rightfully belongs to him.

C. O. THURSTON,

Wyoming Seminary.

INTRODUCTION.

Geographically the Lackawanna and Wyoming are distinct valleys, the latter about 25 miles in length, occupied by a short stretch of the great river of Pennsylvania—the Susquehanna; the former by an eastern tributary of the Susquehanna, the Lackawanna river. Topographically, however, they form a single, narrow, synclinal valley, enclosed by the Lackawanna mountain on the northwest, and the Moosic and Wyoming mountains on the southeast, the two elevations coalescing at each end and continuing as a single range. These two ranges curve like a bow, giving the valley between—55 miles long, and in its widest part 6 miles broad—the form of a crescent. This depression is also geologically of the same formation, and is known as the Northern Anthracite Coal Basin of Pennsylvania.

The Susquehanna breaks through the walls of Lackawanna mountain into the middle region of this basin, leaving on the south side of this gateway the bold cliffs and rocky terraces of Campbell's Ledge, 750 feet above the river. Immediately on entering the valley it is joined by the Lackawanna, whose source is fifty miles from its mouth, far northward of the coal-basin, one branch in the cold marshes of Ararat, Susquehanna Co., one among the ponds of Preston, Wayne Co.

This region, the eastern half of Susquehanna and the western half of Wayne Co., 2000 feet above the sea, is a broad rolling tract of arable but cold land, out of which rise the high isolated mountains of Ararat Peak (which, with Sugarloaf mountain, terminate the northward extension of the Moosic range) and the beautiful double knob of Elk mountain, 2600 and 2700 hundred feet respectively. The Lackawanna enters the Anthracite valley by a gap near its extreme northern end, above Forest City, and traverses it to the Susquehanna at Pittston. The latter river, winding through the celebrated "Wyoming Valley," passes almost out of the coal-basin, westwardly at Nanticoke, traverses a cleft in the mountain barrier for some miles, turns directly south, cutting quite across its southern end, and passes out below Mocanaqua.

This synclinal valley rises from 550 feet above tide at Kingston, 573 feet at Pittston, 740 feet at Scranton, 965 feet at Archbald, 1079 feet at Carbondale, to 1302 feet above tide at Campbell's Ledge, 2220 feet on Penobscot Knob, and 2385 feet on Bald mountain (west of Scranton). Its bed

is made up of coal measures, overlaid in its upper part by the confused, nowhere fertile, drift heaps of the great ice-sheet; in the lower by the soil of a river-plain. Its mountain barriers are composed largely of bold outwardly facing parapets or ridges of Pocono sandstone—the mountain-maker of the region—separated from the coal measures by narrow bands of Mauch Chunk red shales and Pottsville conglomerates; eastward, however, the Pocono sandstone of Moosic mountain extends from 12 to 20 miles, forming a broad, elevated tract, known as the Pocono Mountain Plateau, although here and there on its borders streams cut down through it to the Catskill Sandstone beneath. In general it is a wilderness of cool, tangled swamps, ponds, thickets, woods, of dry barrens and rocks, rough in the extreme, with an elevation of from 1500 to 2000 or 2100 feet, and terminating eastwardly in an irregular escarpment of high cliffs, such as are seen near Pocono Knob, in Monroe Co., or the lower parapets which trace its northward trend. The glacial ice-sheet was spread over this plateau, no doubt, although the great terminal moraine of the continent passes across its lower portion. Erosion has left several curious outlying peaks, capped with the hard Pocono sandstone, and standing as islands, surrounded by a sea of underlying Catskill, worn down to a much lower level, such as Pocono Knob, in Monroe Co., the high knobs (north and south) in Pike Co., the four knobs of the Moosic mountain extension, including Ararat Peak and Sugarloaf, in Wayne Co., and the still more distant and elevated double peak of Elk mountain, in Susquehanna Co., the latter the highest mountain in Pennsylvania beyond the extreme southwestern section of the State. This Anthracite Valley lies wholly within two counties, Lackawanna and Luzerne; the Pocono plateau occupies a limited portion of five, viz: Lackawanna, Monroe, Carbon, Luzerne and Pike counties, named in order of the largest sandstone area.

It is the Flora of this crescent-shaped coal-valley, its mountain barriers, the broad, rough plateau into which the eastern barrier blends, and the isolated peaks belonging to this geological formation, which we have denominated the *Lackawanna and Wyoming Flora*.

While we believe it will be of value as a local catalogue, there was an ulterior object in the study, which can only be completely attained with the exhaustive examination of the region. Recalling the facts previously stated, it will be seen that this area has a singularly distinct character of its own, geologically. It lies in the heart of the northern Alleghenies. It has a great variety of soil. It has considerable variety of elevation; the effect of a much greater elevation being brought about

through the great extent of the plateau. Therefore, from its peculiar position and character, thorough investigation of its native plants ought to throw some light on questions of the geographical distribution of plants in post-glacial times, and the derivation of local floras in the Eastern United States. Final, or indeed valuable conclusions on these questions, we are not at present prepared to give, but shall present those we think our investigations thus far will warrant.

To ascertain the affinity of an insular flora, or that of a continental basin, is an easier task than to set forth the exact truth concerning the genealogy of a small flora, one belonging to a series of contiguous hydrographic basins. Our method of examining thoroughly the distribution of plants over a small hydrographic area, and connecting this with a similar work in a neighboring area, also limited by natural, *not artificial*, boundaries, we believe to be thoroughly scientific. Moreover, we believe that induction based on collated evidence of this character will furnish the only conclusions in the future on the evolution of the floras of continental basins as we now find them, which will be acceptable to the scientific mind. The main facts of geographical distribution are within our reach, but the evolution of the present distribution, excepting in the case of islands or isolated mountains, is a question almost wholly unexplored.

The affinities of a small flora are to some extent shown by the commonest wild plants and by the rarest. The former are present in related floras because inter-distributing has been easy and the conditions of soil and climate particularly favorable. Rare plants may occur for a variety of reasons; but if it is because the region where we find them has so changed in the conditions favorable to their existence that they are being gradually exterminated, then indeed we have in them a precious title-deed, without which we should not be in possession of a series of facts or suggestions, most valuable from the point of view of science. Again, if conditions exist in our region, allowing the rare occurrence of plants which are common much farther north or south, while such species do not appear in contiguous regions, the exact nature of those conditions becomes interesting to us, and usually not difficult to ascertain.

There is another method of determining the relationship of a small flora, however, which seems to us of more value than any other, although its successful and judicious application requires experience. If we find that a small number of species, of coast plants for example, extend to this region but no further west, while a greater number of southern species find their northern limit here, we conclude the flora has greater affinities with the South than with the Atlantic slope. If we find this

flora is the southern limit for many northern species, while it is the northern limit for fewer southern species, then some great northern basin or plateau has contributed, presumably, more to its population than the southern mountain or plain. Such a conclusion must be checked by reference to the affinities of the characteristic types present; nevertheless, concerning the origin of a flora, we consider the test of limit-species a reasonable one, and indeed, from experience, the most critical single test we can apply.

GENERAL RELATIONSHIPS.

CHARACTERISTIC TYPES.—We will now endeavor to make an application of these canons to our Lackawanna, Wyoming and Pocono Flora. The plants common in this region, but common also throughout the Appalachian region, such as the Rhododendron, the Chestnut-Oak, the Birches, the Witch Hazel, the sweet-scented fern, Dicksonia, we pass by as plants which can tell us nothing we do not know in respect to the affinities of a small flora. There are, however, certain species characteristic of the hillsides lining this valley, frequently appearing in large numbers, but which are not of universal occurrence in the Appalachian region. Such are the Wild Indigo, the Sheep Laurel, the Sweet-Fern (*Myrica asplenifolia*), the Sumach (*Rhus copallina*); and in certain places the Purple Hardhack (*Spiraea tomentosa*) and *Andromeda ligustrina* are equally abundant. All of these are wanting or comparatively rare immediately outside the valley to the north or west.

The above plants and others we might name are characteristic of, though not confined to, the drier region of the Atlantic slope, and their presence here is due, no doubt, largely to the character of the soil.

RARE PLANTS.—Of the rare plants of the Flora exclusive of the Pocono, we might mention *Linum sulcatum*, *Silene Pennsylvanica*, *Phytostegia*, *Pedicularis lanceolata*, *Cunila*, *Potentilla arguta*, *Allium cernuum*, *Utricularia intermedia*, *U. cornuta*, and others, reported to be scarce in Pennsylvania, while the pretty *Potentilla tridentata*, occurring on the summits of Penobscot Knob and Bald mountain, is known nowhere else in the State. In passing to the Pocono this list would be greatly increased. Of these the only one we wish to speak of in this connection is the Little Mistletoe (*Arceuthobium pusillum*) parasitic on the limbs of the Black Spruce, discovered by the writer in 1886, and noted in his "Preliminary List" of this region. It is known in a few places in New York and New Hampshire, and nowhere south of our stations, which are the only ones yet discovered in Pennsylvania.

ALLEGHENIAN SPECIES.—The Allegheny mountains, from their peculiar position, their densely wooded character, the amount of moisture condensing on them, are the home, especially in their southern section, of a large number of species peculiar to their slopes or summits. Our Flora also has its list of those which may be called Alleghenian, small in proportion to the less distinctive character and lower elevation of the Pennsylvanian ranges. We include the following in this list:

Dicentra Eximia,

Aster concinnus,

Ilex mollis,

Calamagrostis Porteri.

The following are also characteristically Alleghenian, although occasionally found in the mountains of New York and New England, or in districts allied to the Allegheny system:

Ilex monticola,

Carex lurida, var. *gracilis*,

Rhododendron maximum,

Carex æstivalis,

Asplenium montanum.

The only one of the nine plants mentioned which descends into the valley proper is the *Rhododendron*, which is less distinctively Alleghenian than the others. On the other hand, the earlier list of common plants mentioned, which give character to this region, and distinguish it from the districts adjoining north and west, are mostly plants of the valley or of the lower slopes of the mountains.

SPECIAL AFFINITIES WITH LARGER FLORAS.

Turning now to a consideration of those species which have their centers of development in regions more or less remote from our valley and plateau, and which extend to this region, but no farther, we find facts of considerable interest.

THE ATLANTIC SLOPE.—There are a certain number of Atlantic slope species whose western limits of distribution are within our borders. We have noted the following:

Lechea thymifolia,

**Orontium aquaticum,*

Solidago puberula,

Calamagrostis Nuttallii,

Aster radula,

Lycopodium inundatum,

var. *Bigelovii.*

*The "Golden Club," *Orontium aquaticum*, growing in several of our ponds, deserves a passing notice, as it may have been introduced here by the Indians. Kalm ("Travels in Nor. America," II., p. 110-115) says its seeds are used as food by the Indians, who call it *Taw-kee*. Brinton ("Lenni Lenape and their Legends," p. 50) says "the Delaware Indians" (the former occupants of the Wyoming Valley and also of the Atlantic coast regions), "collected for food the seeds of the Golden Club, common in the pools along the Creeks." In their migrations back and forth they may have transplanted this food plant to the inland ponds.

SOUTHERN SPECIES.—So far as we are able to learn the following southern and southwestern species extend no farther north or northwest (or but little farther), although a few extend along the coast into New York or New England :

<i>Arabis dentata</i> ,	<i>Betula nigra</i> ,
<i>Dicentra eximia</i> ,	<i>Pinus inops</i> ,
<i>Silene Pennsylvanica</i> ,	<i>Aletris farinosa</i> .
<i>Ilex mollis</i> ,	<i>Melanthium latifolium</i> ,
<i>Robinia Pseudacacia</i> ,	<i>Amianthium muscatoxicum</i> ,
<i>Helianthus parviflorus</i> ,	<i>Scleria pauciflora</i> ,
<i>Rhododendron canescens</i> ,	<i>Panicum agrostoides</i> ,
<i>Cunila Mariana</i> ,	<i>Triodia cuprea</i> .

The above divide themselves into two groups, the plants belonging to the valley and the plants belonging to the dry ridges of the mountains, corroborating the evidence we find from actual observation, of their origin in a warmer region. We trace the beautiful River Birch up the branches of the Delaware, up the Susquehanna from its mouth to above the Wyoming Valley, but not certainly beyond Tunkhannock, and up the Lackawanna to Peckville. Like the dusky *Pinus inops*, its presence suggests the peculiar warmth of the south. *Robinia* was noticed more than a century ago by travellers crossing "Locust Ridge" on the Pocono. This, with *Melanthium* and *Amianthium*, two curious Liliaceæ, are characteristic of the mountain group of the southern species.

NORTHERN SPECIES.—But our Flora is connected with the north by a far greater number of peculiar species than with any other region. Above fifty-five northern species have been found which do not extend south of our territory. This number, moreover, does not include those species recognized as northern, but which extend through this section, along the Alleghenies to North Carolina or Georgia. Twenty of the fifty-five belong to the Heaths and the Sedges. The Rhodora, the Pale Laurel, the Labrador Tea, the Small Cranberry, the Cotton Sedge, all particularly attractive plants, belong to these two orders. Nearly all these northern forms are confined to the mountains, and in the case of those found in the valley, as well such as *Portentilla palustris*, I suspect they will ultimately be discovered much further south, where they have retreated wholly to the mountains.

WESTERN SPECIES.—Turning to the west, I have been able to find but two western species extending eastward only to our limits, a garlic, *Allium cernuum*, and a grass, *Kaleria cristata*.

CONCLUSIONS.

Comparing this Flora with the Cayuga Flora, and enumerating the species whose distribution terminates in each, we have tabulated the following facts :

	Northern.	Southern and S.W.	Western and S.W.	Atlantic Slope.
Cayuga Flora	16	14	16	3
Lackawanna and Wyoming Flora	55	17	2	6

These figures are of course not absolutely correct, and cannot be until our Flora is more fully studied and distribution in general is more accurately known, but they are relatively so.

While the Cayuga is most closely related to the territory which includes the Ohio Valley and the southern shores of several of the Great Lakes, it has a considerable affinity for the North and Northwest and but little for the Coast. The Lackawanna and Wyoming Flora, including the Pocono Plateau, shows a strong relationship with the North, next with the South, and really a decided affinity (although not exhibited by a large number of peculiar species) with the coast. Indeed, the similarity in aspect between the vegetation of this region and that of the Connecticut coast is striking. Excluding the Pocono, its relationship is largely with the South, next with the Atlantic slope, while that with the North is scarcely discoverable.

The cause of the relation of the Pocono table-land flora with the northern lies not so much in the height as in the breadth of the plateau, and the density and coolness of the original forests clothing it. I have perused a considerable number of journals of army officers, travelers, naturalists and missionaries, who traversed the Pocono more than a century ago, when it was threaded only by two slender trails traced by the children of the forest. It was then known as the "Great Swamp." On it were vast tracts of forest, tangled, wet, dark and gloomy. Col. Dearborn, writing in 1779, says after passing the Pocono Knob he entered what is called the Great Swamp, containing trees of pine, spruce, hemlock and maple of amazing size. This includes a dark, dismal portion, between Locust Hill and the head of Laurel Run, known as the "Shades of Death." Rev. Wm. Rogers refers also to the great height of the pines (White Pine), ascending 150 feet before reaching limbs. The abundance of the larger "Lawrel" is also commented on. There is abundant testimony showing that this was a heavily forested tract originally. Now, great areas of barrens greet the eye, where alders, dwarf

oaks, red cherry, raspberry, brake and bristly sarsaparilla have take the place of the original forests on lands desolated by the lumberman's axe and by fire. There are portions of the pristine "Evergreen Woods" still left, or but just disappearing. The dark, dense Spruce woods about Lehigh Pond is an instance. Here we still find the Lady Slipper and Orchis undisturbed, and see how the Rhododendron, when in flower, lighted up the gloom of the forest primeval when the earliest travelers crossed the Pocono. This is indeed a natural forest region, and the removal of the woods only demonstrates more clearly, what one of the earliest observers asserted, viz: the utter uselessness of a large portion for either pasture or cultivation.

Every consideration of economy, public good, and even private wealth, demand that these regions be reforested. If woods again cover this table-land they will hold back, by means of the spongy soil they accumulate, the surplus freshet waters from the hundred torrents and mountain-brooks which supply pure water to the great coal-valley cities, and which ought to keep up through the long drouths the volume of the Lehigh, Lackawanna, and the brooks flowing into the Delaware. Furthermore, the pine, hemlock, spruce and cherry which once grew here to "amazing size," may be again grown through planting, as they are in the mountains of Europe, and made a source of future wealth.

LOCAL NAMES.

In Heckwelder's *History of the Indian Nations*, Brinton's *Lenni Lenape*, the works of Peter Kalm, David Zeisberger, George Henry Loskill, Clark, Hale, and others, the meaning given of a number of the Delaware names applied to our region has interested me. I give a few notes on the important ones.

Susquehanna: the latter part of river names among the Delawares, viz., *hanna*, *hanni* or *hannock*, means a "flowing stream"; and Heckwelder says *Susquehanna* means a "straight stream," referring to its course near the mouth.

Lackawanna (*Lechau-hanneck*), "the fork of the river," referring to the junction of this with the *Susquehanna*.

Lehigh (*Lechau*), the same as the preceding, meaning here the fork or branch of the Delaware.

Tobyhanna (*Topi-hanneck*), the "alder stream."

Tunkhannock, the "small stream."

Wyoming, the "great plains."

Moosic, origin not known to me. It is near a word in one of the Del-

aware dialects meaning "marsh" or "swamp." The English name, the "Great Swamp," may have been derived from the Indian name, the localities being practically identical.

Pocono, the origin unknown to me. On old maps Pocono creek is called *Pocono-hanni*. The meaning of this, viz., the "stream dividing" the hills, is very appropriate, as this creek occupies a broad recession on the eastern side of the plateau. Possibly the name may have been transferred by the English settlers to the mountain.

Nanticoke, the "tide water people," the name of a tribe settling in the valley, but originally from Maryland.

ELEVATIONS ABOVE TIDE.

The figures following are those of railroad surveys and the Second Geological Survey of Pennsylvania:

D., L. & W. R. R.	Abington	1055'
	Clark's Summit	1239'
	Scranton	740'
	Dunnings	1397'
	Moscow	1555'
	Gouldsboro Sta.	1890'
	Tobyhanna	1929'
	Summit, N. of Tobyhanna	1970'
	Delaware River	298'
N. Y., L. E. & W.	Ararat Summit	2023'
	Uniondale	1693'
	Carbondale	1079'
	Archbald	965'
D., L. & W. R. R.	Pittston	573'
	Level of river, Pittston	535'
	Kingston	550'
Lakes, Susq. Co.	Crystal Lake	1705
	Dunn's Pond	about 2150
Wayne Co.	Eight lakes between	1950' and 2000'
Mountains	Bald Mt., W. of Scranton	2385'
	Campbell's Ledge (Dial Knob)	1302'
	Ledge opposite Campbell's	1200'
	Penobscot Knob	2220'
	Highest of River Mountains	1380'
	General level of higher parts of the Pocono,	1800-2000'

Knob of Pocono 3 miles W. of Tannersville,	2225'
High Knob, in Pike Co.	2010'
Ararat Peak, Wayne Co.	2600'
Sugar Loaf, Wayne Co.	2450'
Elk Mountain, Susq. Co., South Knob . .	2575'
“ “ North Knob	2700'

In closing I cannot refrain from expressing my cordial appreciation of the work of Professor Thurston, who has written so much of this Flora. To him will no doubt be largely left the subsequent accumulation of facts and the final revision of this publication. Every aid possible from the botanists of Pennsylvania, who have so kindly aided me, I solicit in his behalf.

WILLIAM RUSSEL DUDLEY,
Ithaca, N. Y.

SUMMARY.

Native species,	858
Introduced species,	115
Varieties,	31
<hr/>	
Total,	1004

CORRECTIONS AND ADDITIONS.

- Page 10. 101 ½. **Cerastium nutans**, Raf.
Near Kingston; frequent.
- Page 11. 119 ½. **LINUM USITATISSIMUM**, L.
By R. R. at Mt. Pocono; also at Coxton.
- Page 11. 120 ½. **Geranium Carolinianum**, L.
Frequent in Wyoming Valley.
- Page 11. **FLCERKIA**, WILLD.
121 ½. **F. proserpinacoides**, Willd.
Kingston, along the river.
- Page 16. **STYLOSANTHES**, SWARTZ.
183 ½. **S. elatior**, Swz. Tobyhanna Mills. *Prof. Porter.*
Near W. Pittston. *Thurston.*
- Page 19. **AGRIMONIA**, TOURN.
219 ½. **A. Eupatoria**, L. Common.
- Page 37. 443. Read **V. macrocarpon**.
- Page 54. 613 ½. **Euphorbia corollata**, L.
W. Pittston; near Kingston.
- Page 58. 654. Read **Q. coccinea**, Wang. Var. **tinctoria**.
- Page 58. 656. Read **C. sativa**, Mill. Var. **Americana**.
- Page 77. For **Andropocyon** read **Andropogon**.
- Page 79. **TRisetum**, PERSOON.
900 ½. **T. palustre**, Torr. Near Pocono Knob. *Dudley.*
- Page 84. **LYGODIUM**, SWARTZ.
959 ½. **L. palmatum**, Swz.
Near Long Pond, July 18, 1891. *Dudley.*

DICOTYLEDONS.

I. RANUNCULACEÆ.

CLEMATIS, L.

1. *C. Virginiana*, L. WHITE C. VIRGINS' BOWER.
Banks of streams, etc.; common.
2. *C. verticillaris*, DC. PURPLE C.
Elk Mt., about "Prospect Rock;" Bald Mt., near Bluff; rare.
Dudley.

ANEMONE, TOURN.

3. *A. cylindrica*, GRAY. Copse N. of Luzerne; rare. *Thurston.*
4. *A. Virginiana*, L. Frequent.
Var. *alba*, (Man., p. 38.) Abundant about Mocanaqua and
Campbell's Ledge. *Dudley.*
5. *A. Pennsylvanica*, L. Kingston Flats. *Mrs. J. H. Race.*
6. *A. nemorosa*, L. WIND-FLOWER. WOOD ANEMONE.
Common about Archbald. *Davis.*
Not at all common in Wyoming Valley. *Thurston.*

HEPATICA, DILL.

7. *H. triloba*, CHAIX. Near Dunmore. *Graves.*
Common in Wyoming Valley. *Thurston.* Near Duryea. *Dudley.*
8. *H. acutiloba*, DC. Archbald. *Davis.*
Common at Tompkinsville. *Graves.*
I have never seen it in the Wyoming Valley. *Thurston.*

ANEMONELLA, SPACH.

9. *A. thalictroides*, SPACH. RUE ANEMONE. Common.

THALICTRUM, TOURN.

10. *T. diocum*, L. EARLY RUE.
Frequent in Wyoming Valley. *Thurston.*

11. *T. polygamum*, Muhl. (*T. Cornuti*, L., 5th ed. Man.) TALL MEADOW RUE. Frequent in Wyoming Valley, in wet soil. No stations above Pittston have been reported for the two preceding.

12. *T. purpurascens*, L.

Slocum's Hill, near Pittston. *Miss Carlson.*

Penobscot Knob, abundant; Bald Mt; Campbell's Ledge. *Dudley.*

RANUNCULUS, TOURN.

13. *R. aquatilis*, L., var. *trichophyllus*, Gray.

WHITE WATER-GROWFOOT. In streams above Gouldsboro. *Dudley.*

14. *R. ambigens*, Watson. (*R. alismæfolius*, Man., 5th ed.) Wyoming Swamp. *Thurston.*

15. *R. abortivus*, L. SMALL-FLOWERED CROWFOOT. Very common.

16. *R. recurvatus*, Poir. Woods near Dunmore; Duryea; Fairview; near L. Henry. *Dudley.*

17. *R. septentrionalis*, Poir. (*R. repens*, L., Man., 5th ed., in part.) Plainsville. *Davis.* Near Gouldsboro Pond. *Dudley.* The dry ground form is our earliest buttercup, and is common.

18. *R. Pennsylvanicus*, L. Common in wet soil.

19. *R. ACRIS*, L. COMMON BUTTERCUP. Abundant.

CALTHA, L.

MARSH-MARIGOLD. "COWSLIPS."

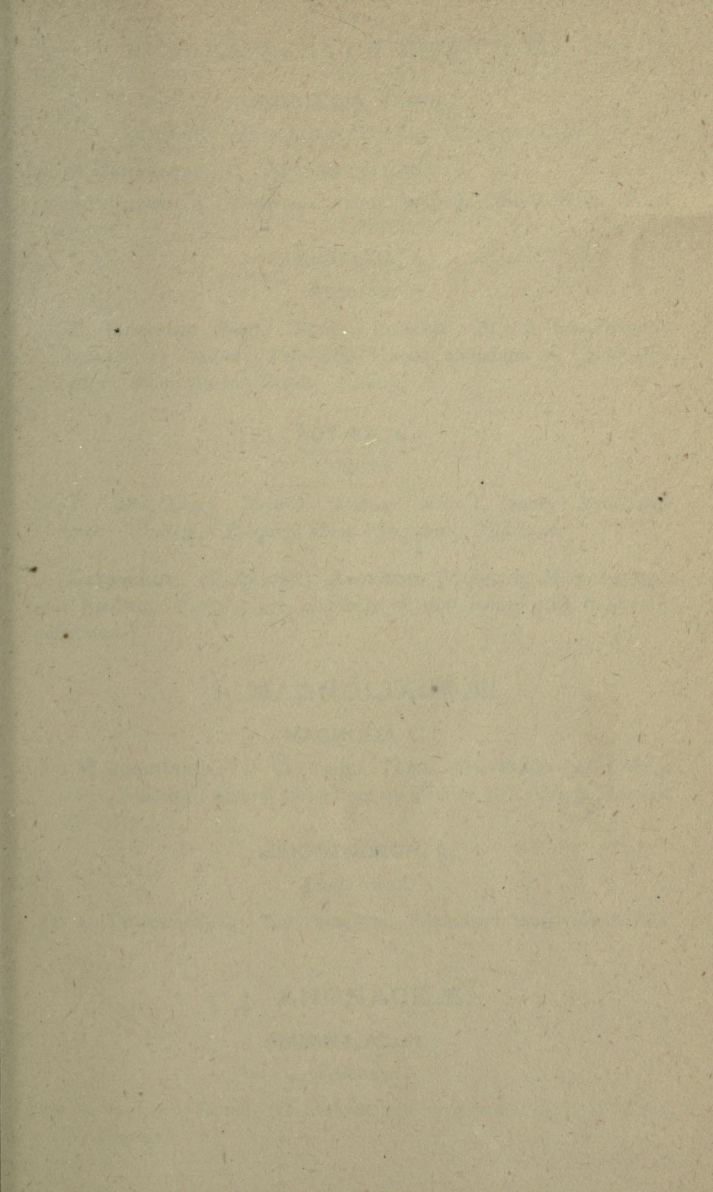
20. *C. palustris*, L. Archbald. *Davis.* Near Scranton. *Mrs. Buell.* Near Forty Fort. *L. G. Clark.* Near R. R. above Gouldsboro; Lehigh Pond. *Dudley.* Swamp N. of Luzerne. *G. B. Stone.*

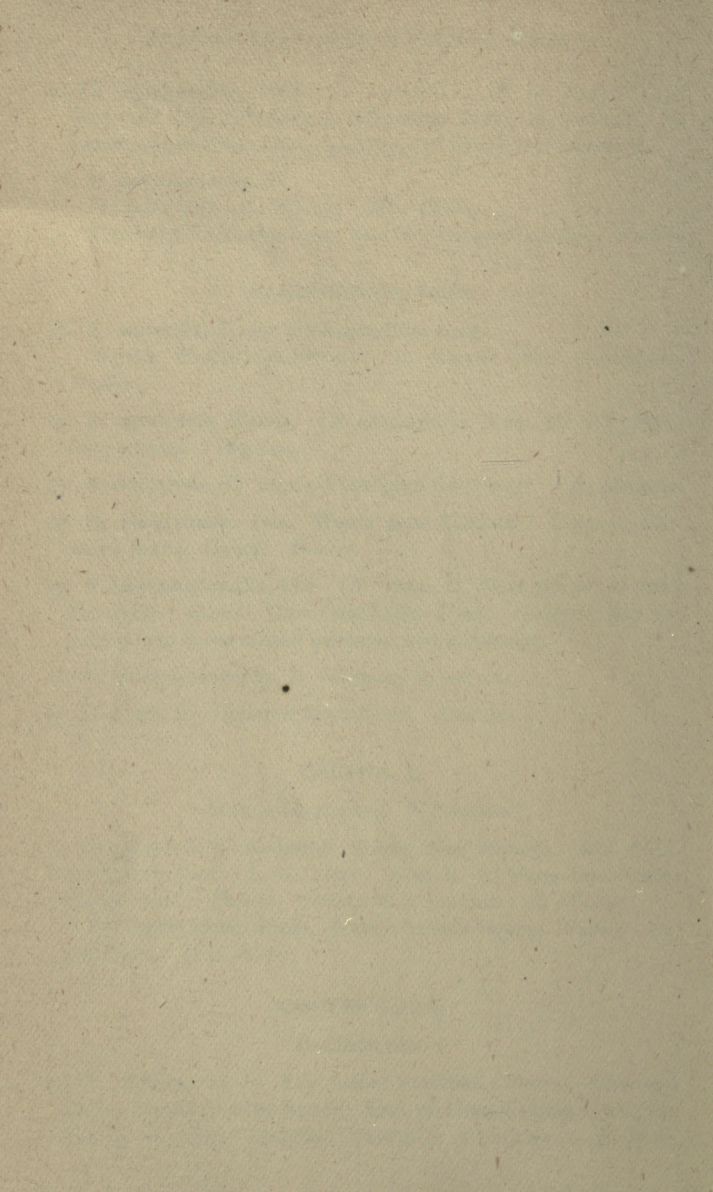
Var. *flabellifolia*, Pursh. Pocono Summit Spring. *Dudley.* Naomi Pines. *Prof. Porter.*

COPTIS, SALISB.

GOLDTHREAD.

21. *C. trifolia*, Salisb. Lily Lake; Archbald. *Davis.* Atherton's Pond; Pocono Summit Spring; head of Little Roaring Brook, etc. *Dudley.* Lehman. *Thurston.* Swamp N. of Luzerne. *G. B. Stone.*





AQUILEGIA, TOURN.

COLUMBINE (often incorrectly called HONEYSUCKLE).

22. **A. Canadensis**, L. Abundant on cliffs.23. **A. VULGARIS**, L. Cultivated; rarely escaped. Naomi Pines. *Prof. Porter.*

CIMICIFUGA, L.

BUGBANE.

24. **C. racemosa**, Nutt. BLACK COHOSH. BLACK SNAKEROOT. Mocanaqua; Duryea; Penobscot Knob; abundant at Campbell's Ledge; Mountain Inn Road. *Dudley.*

ACTÆA, L.

COHOSH.

25. **A. alba**, Bigel. Jermyn. *Davis.* Near L. Henry; Penobscot Knob. *Dudley.* Frequent about Kingston. *Thurston.*

[**Delphinium** (LARKSPUR), **Aconitum** (ACONITE, MONKSHOOD), and **Pæonia** (PÆONY) are members of this family and frequently cultivated.]

2. MAGNOLIACEÆ.

MAGNOLIA L.

26. **M. acuminata**, L. CUCUMBER TREE. One shade tree College street, Kingston; several small trees on farm of J. L. Camp, Herrick. *Thurston.*

LIRIODENDRON, L.

TULIP-TREE.

27. **L. Tulipifera**, L. WHITE-WOOD. Abundant; mostly small trees.

3. ANONACEÆ.

ASIMINA, ADANS.

PAWPAW.

28. **A. TRILOBA**, Dunal. One shade tree on grounds of T. W. Kyte, W. Pittston.

4. MENISPERMACEÆ.

MENISPERMUM, L.

MOONSEED.

29. *M. Canadense*, L. River bank, near Kingston.

5. BERBERIDACEÆ.

BERBERIS, L.

BARBERRY.

30. *B. vulgaris*, L. W. of Archbald, one bush. *Davis*. One in swamp near Kingston. *Thurston*.

CAULOPHYLLUM, MICHX.

BLUE COHOSH.

31. *C. thalictroides*, Michx. Near L. Henry. *Dudley*. Cliff opp. Campbell's Ledge. *Thurston*.

PODOPHYLLUM, L.

MANDRAKE. MAY APPLE.

32. *P. peltatum*, L. Common.

6. NYMPHÆACEÆ.

BRASENIA, SCHREBER.

WATER-SHIELD.

33. *B. peltata*, Pursh. Pocono station, '81. *Prof. Porter*.
Pocono station, '89; L. Henry; Reservoir Lake, E. of Glen Summit. *Dudley*.

NYMPHÆA, TOURN.

WHITE WATER-LILY.

34. *N. odorata*, Ait. In ponds near Crystal Lake; Lake Henry. *Dudley*.

NUPHAR, SMITH.

YELLOW POND-LILY.

35. *N. advena*, Ait. Common in swamps and pools.
36. *N. Kalmianum*, Ait. (*N. luteum*, var. *pumilum*, Man., 5th ed.)
Tobyhanna Mills, '81. *Prof. Porter*. Lake Henry. *Dudley*.

7. SARRACENIACEÆ.

SARRACENIA, TOURN.

37. *S. purpurea*, L. PITCHER-PLANT. L. Ariel. *Miss Carlson*. Tompkinsville; Newton L. *Graves*. Atherton's Pond; Moosic L.; Pocono Summit; swamp at head of Little Roaring Brook; Lehigh Pond. One specimen from Lehigh Pond, collected by W. Peck, shows a double flower; there are five petals and some twenty petaloid bodies, longer than petals and as broad, formed from the stamens. In herbarium of Lackawanna Institute. *Dudley*.

8. PAPAVERACEÆ.

SANGUINARIA, DILL.

38. *S. Canadensis*, L. BLOOD-ROOT. Near Scranton. *Mrs. Buell*. Carpenter's Island. *Miss Carlson*. Campbell's Ledge; near Kingston; back of toll-gate, above Luzerne. *Thurston*.

CHELIDONIUM, L. CELANDINE.

39. *C. MAJUS*, L. By creek near Wyoming; Kingston streets. *Thurston*. Near Scranton. *Mrs. Buell*.

9. FUMARIACEÆ.

ADLUMIA, RAF.

40. *A. cirrhosa*, Raf. ALLEGHENY VINE. Scarce. Lynn, in herbarium. *Davis*. Between Jermy and Tompkinsville. *Graves*. Above Mocanaqua; S. of Dalton Station. *Dudley*.

DICENTRA, BORKH.

41. *D. Cucullaria*, DC. DUTCHMAN'S BREECHES. Carpenter's Island. *Miss Carlson*. Near Hyde Park. *Mrs. Buell*. Common at Tompkinsville. *Graves*. Near Kingston.
42. *D. Canadensis*, DC. SQUIRREL CORN. Reported in '87 by *Mrs. Buell* of Scranton, and *Mr. Davis* of Archbald. I have never seen it in Wyoming Valley. *Thurston*.
43. *D. eximia*, DC. Near Nay Aug Falls. *Graves*.
44. *D. SPECTABILIS*, BLEEDING HEART. Often cultivated; from China.

CORYDALIS, VENT.

45. *C. glauca*, Pursh. Occasional among rocks ; reported from Kingston, Nay Aug, Mocanaqua, Campbell's Ledge, etc.

10. CRUCIFERÆ.

DENTARIA, TOURN.

PEPPER-ROOT.

46. *D. diphylla*, L. Peckville ; Archbald. *Davis*.
 47. *D. laciniata*, Muhl. Near Kingston. *C. B. Henry*. Carpenter's Island. *Miss Carlson*.

CARDAMINE, TOURN.

48. *C. rhomboidea*, DC. Woods near Gouldsboro. *Dudley*. Common about Kingston. *Thurston*.
 49. *C. hirsuta*, L. Lower Lackawanna Valley. *Dudley*. Var. *sylvatica*, Gaud. On river mountains above Mocanaqua. *Dudley*.

ARABIS, L.

ROCK-CRESS.

50. *A. hirsuta*, Scop. Sandstone ledge N. of Taylorville. *Dudley*.
 51. *A. lævigata*, Poir. Kingston. *Thurston*.
 52. *A. Canadensis*, L. SICKLE-POD. Campbell's Ledge ; Mocanaqua. *Dudley*.
 53. *A. lyrata*, L. Common on cliffs.
 54. *A. dentata*, Torr. and Gray. Abundant in grove opp. Wilkes-Barre. *Thurston*.

DRABA, DILL.

55. *D. Verna*, L. WHITLOW-GRASS. Near Toby's Cave, Kingston. *Thurston*.

NASTURTIUM, R. BR.

WATER-CRESS.

56. *N. officinale*, R. Br. Common.
 57. *N. palustre*, DC. Common.
 58. *N. armoracia*, Fries. HORSERADISH. Often cultivated.

BARBAREA, R. BR.

WINTER-CRESS.

59. *B. vulgaris*, R. Br. Common.

ERYSIMUM, TOURN.

60. *E. cheiranthoides*, L. Below Mocanaqua. *Dudley*. Kingston
"Flats." *Thurston*.

SISYMBRIUM, TOURN.

HEDGE MUSTARD.

61. *S. officinale*, Scop. Common.

BRASSICA, TOURN.

62. *B. sinapistrum*, Boiss. Near Scranton. *Mrs. Buell*. Crystal
Lake. *Dudley*. The cultivated turnip, cabbage, etc., belong to spe-
cies of this genus.

63. *B. nigra*, Gray. Common. *Davis*. Near Kingston. *Thurston*.

CAPSELLA, MEDIC.

SHEPHERD'S PURSE.

64. *C. bursa-pastoris*, Moench. Very common.

LEPIDIUM, TOURN.

PEPPERGRASS.

65. *L. virginicum*, L. Common.

66. *L. ruderale*, L. Coxtown. *Miss Carlson*. Wilkes-Barre; Scranton. *Dudley*.

L. sativum, L. CULTIVATED PEPPERGRASS.

RAPHANUS, TOURN.

67. *R. sativus*, L. RADISH. Cultivated.

Escaped near Scranton. *Dudley*.

II. CAPPARIDACEÆ.

POLANISIA, RAF.

68. *P. graveolens*, Raf. Susquehanna River, near L. and B. Junction. *Dudley*.

12. CISTACEÆ

HELIANTHEMUM, TOURN.

69. *H. Canadense*, Michx. ROCK-ROSE. Lower Lackawanna Valley; Penobscot Knob; Campbell's Ledge. *Dudley*. Near Kingston. *Thurston*.

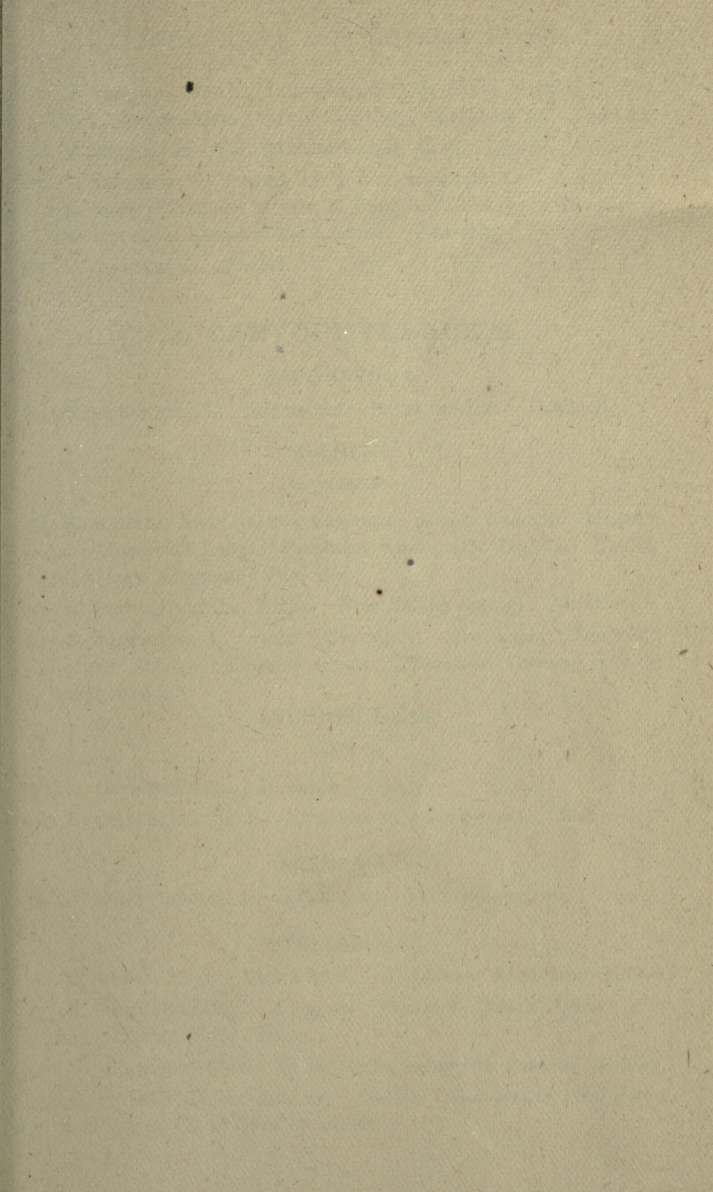
LECHEA, KALM.

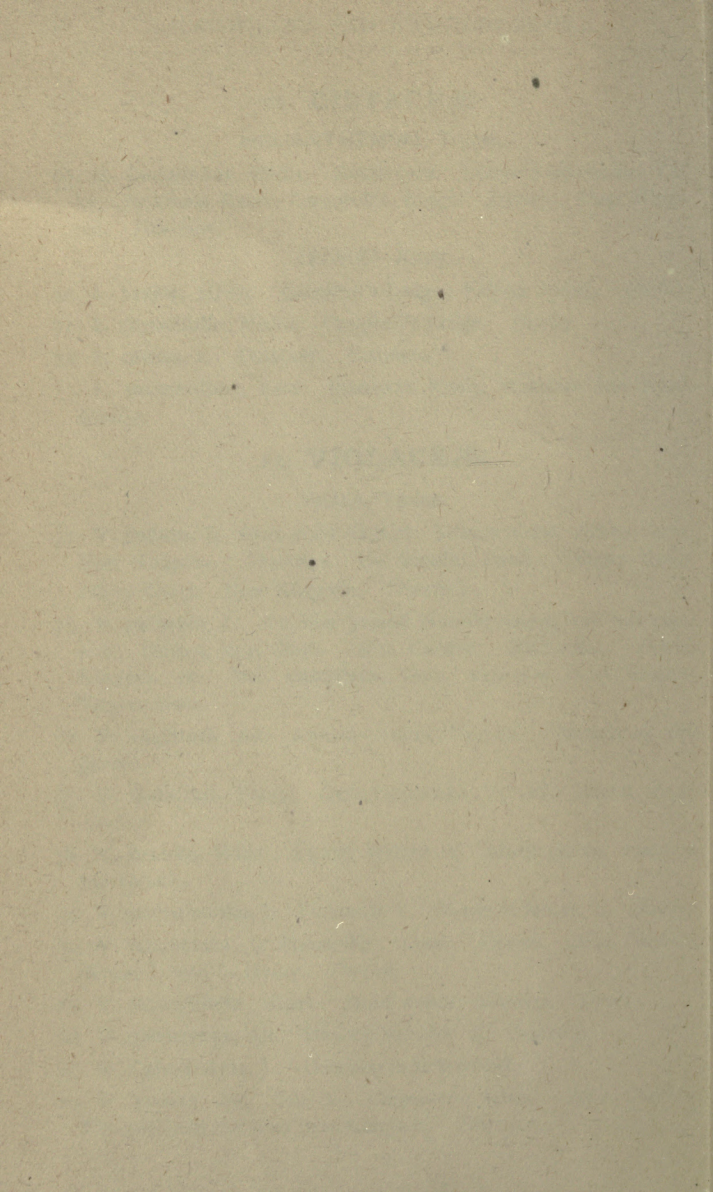
70. *L. major*, Michx. Campbell's Ledge; Falling Spring. *Dudley*.
 71. *L. thymifolia*, Michx. Campbell's Ledge. *Dudley*.
 72. *L. minor*, L. PINWEED. Common.
 73. *L. racemulosa*, Lam. Penobscot Knob; Mountain Inn Road. *Dudley*.

13. VIOLACEÆ.

VIOLA, TOURN.

74. *V. pedata*, L. BIRD-FOOT VIOLET. Tilbury Knob. *Harry Camp*. Near Kingston. *Thurston*. Var. *bicolor*, Pursh. Tilbury Knob. *Harry Camp*. Near Kingston. *Thurston*.
 75. *V. palmata*, L. On drier ground than the variety and less common; Pittston, opp. Park. *Miss Carlson*. Plainsville. *Davis*. Kingston, etc. Var. *cucullata*, Gray. COMMON BLUE VIOLET. Very common.
 76. *V. sagittata*, Ait. ARROW-LEAVED VIOLET. Common on dry ground.
 77. *V. Selkirkii*, Pursh. GREAT-SPURRED VIOLET. Ararat Peak. *Dudley*.
 78. *V. blanda*, Willd. SWEET WHITE V. Moist places, common and variable.
 79. *V. primulæfolia*, L. PRIMROSE V. Shores of Moosic L. *Dudley*.
 80. *V. lanceolata*, L. Plainsville. *Davis*. Coxtown. *Miss Carlson*. Moosic L. and L. Henry. *Dudley*.
 81. *V. rotundifolia*, Michx. Moist woods; common. *Davis*.
 82. *V. pubescens*, Ait. DOWNY YELLOW V. Common.
 83. *V. Canadensis*, L. Common in rich woods.
 84. *V. striata*, Ait. Pale V. Carpenter's Island. *Miss Carlson*. Two places by the river near Kingston. *Thurston*.





85. *V. rostrata*, Pursh. LONG-SPURRED V. Near Archbald; rare. *Davis*. Ashley Planes; back of Toll Gate, above Luzerne. *Thurston*.
86. *V. canina*, L. Var. *Muhlenbergii*, Gray. DOG V. Common.
87. *V. TRICOLOR*, L. PANSY. Cult. Var. *arvensis*, Gr. A light colored variety abundant at base of Campbell's Ledge; a blue variety abundant about Kingston and Luzerne. *Thurston*.
88. *V. ODORATA* L. English V. Cult.

14. CARYOPHYLLACEÆ.

SAPONARIA, L.

89. *S. OFFICINALIS*, L. SOAPWORT. BOUNCING BET. Common.

SILENE, L.

CATCHFLY.

90. *S. stellata*, Ait. STARRY CAMPION. Rather common. Mocanaqua; Campbell's Ledge; Penobscot Knob; near Duryea. *Dudley*. Wyoming; Kingston. *Thurston*.
91. *S. Pennsylvanica*, Michx. Near Falling Spring. *Thurston*.
92. *S. antirrhina*, L. SLEEPY CATCHFLY. Mocanaqua; Campbell's Ledge. *Dudley*. Kingston streets. *Thurston*. Opening only in bright sunshine.

LYCHNIS, TOURN.

COCKLE.

93. *L. GITHAGO*, Lam. In fields. *Davis*.
94. *L. VESPERTINA*, Sibth. Kingston, in waste ground. *Thurston*.

ARENARIA, L.

95. *A. SERPYLLIFOLIA*, L. SANDWORT. Wilkes-Barre, etc. *Dudley*.

STELLARIA, L.

96. *S. MEDIA*, Smith. CHICKWEED. A common weed from Europe.
97. *S. longifolia*, Muhl. Kingston. *Thurston*. Beach Haven. *Davis*. Coxtown. *Miss Carlson*.
98. *S. uliginosa*, Murr. In big spring below Mt. Pocono. *Dudley*.
99. *S. borealis*, Bigel. Elk Mt. *Dudley*. Also sent to Prof. Porter from Wayne Co. by John M. Dolph.

CERASTIUM, L.

100. *C. VISCOSUM*, L. MOUSE-EAR CHICKWEED. Common.
 101. *C. arvense*, L. FIELD CHICKWEED. Rather common about Kingston. *Thurston*.

SPERGULA, L.

102. *S. ARVENSIS*, L. CORN SPURRY. Above Carbondale; near Ararat Station. *Dudley*.

[The CARNATION PINK, SWEET WILLIAM, etc., are cultivated species of the genus *Dianthus*.]

15. PORTULACACEÆ.

PORTULACA, TOURN.

103. *P. OLERACEA*, L. PURSLANE. A common garden weed from Europe.

CLAYTONIA, GRONOV.

SPRING-BEAUTY.

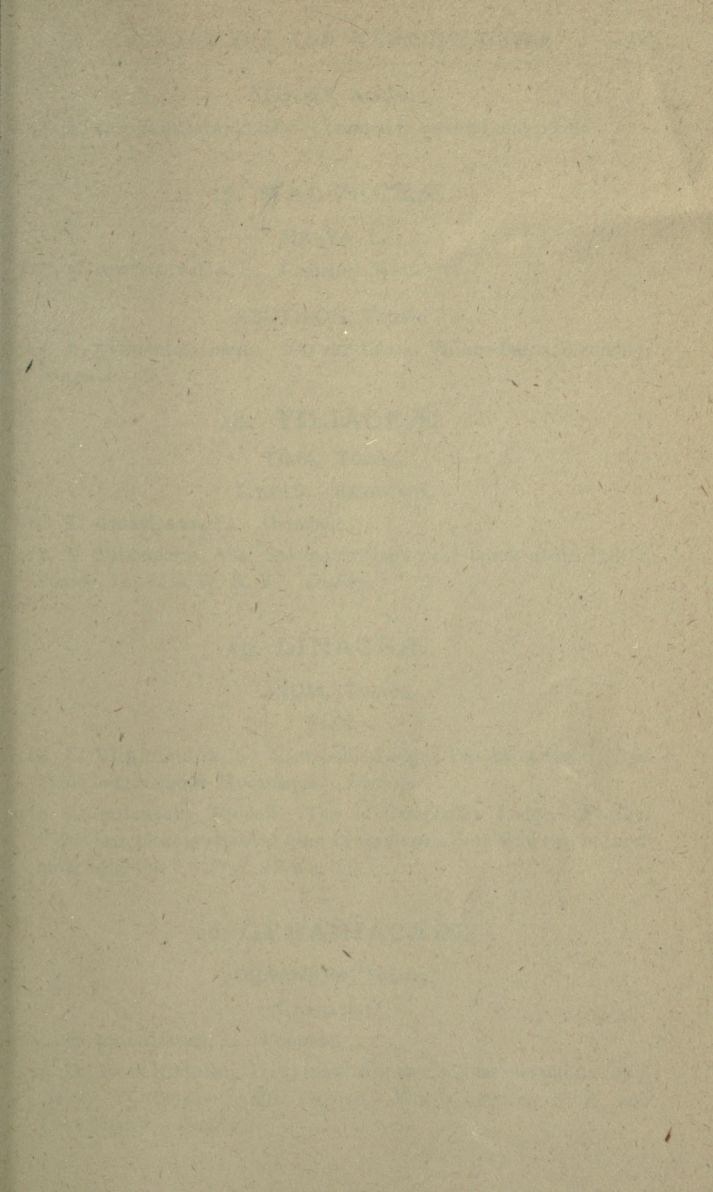
104. *C. Virginica*, L. Near Scranton. *Mrs. Buell*. Carpenter's Island. *Miss Carlson*.
 105. *C. Caroliniana*, Michx. Common.

16. HYPERICACEÆ.

HYPERICUM, TOURN.

ST. JOHN'S WORT.

106. *H. Ascyron*, L. Near Kingston. *Thurston*.
 107. *H. ellipticum*, Hook. Tobyhanna Mills, '81. *Prof. Porter*. Moosic Lake. *Dudley*.
 108. *H. PERFORATUM*, L. Common.
 109. *H. maculatum*, Walt. (*H. corymbosum*, Muhl. 5th ed. Man.) Rather common.
 110. *H. mutilum*, L. Rather common.
 111. *H. Canadense*, L. Pocono Station, D., L. & W. R. R., '81. *Prof. Porter*. Pocono Summit. *Dudley*.
 112. *H. nudicaule*, Walt. (*H. Sarothra*, Michx.) Common in Wyoming Valley, in dry fields. *Thurston*.



ELODES, ADANS.

113. *E. campanulata*, Pursh. Common in swamps and ponds.

17. MALVACEÆ.

MALVA, L.

114. *M. rotundifolia*, L. COMMON MALLOW.

ABUTILON, TOURN.

115. *A. avicennæ*, Gaertn. VELVET-LEAF. Wilkes-Barre, Wyoming, Kingston, etc.

18. TILIACEÆ.

TILIA, TOURN.

LINDEN. BASSWOOD.

116. *T. americana*, L. Abundant.
117. *T. pubescens*, Ait. Solomon's Gap; near brook above Dalton Station, D., L. & W. R. R. *Dudley*.

19. LINACEÆ.

LINUM, TOURN.

FLAX.

118. *L. virginianum*, L. Campbell's Ledge; Penobscot Knob; Red Shale ledges above Mocanaqua. *Dudley*.
119. *L. sulcatum*, Riddell. Top of Campbell's Ledge. *Dudley*.
"This rare plant is reported from Pennsylvania only from two or three other localities." *Prof. Porter*, '87.

20. GERANIACEÆ.

GERANIUM, TOURN.

CRANESBILL.

120. *G. maculatum*, L. Common.
121. *G. robertianum*, L. HERB ROBERT. Near Scranton *Mrs. Buell*. W. Pittston. *Miss Carlson*. Woods between R. R. and Lake Henry. *Dudley*.

OXALIS, L.

WOOD-SORREL.

122. *O. Acetosella*, L. Rather common in cold woods.
 123. *O. violacea*, L. Near Shickshinny. *Miss Fredia Rugyles*. Tilbury Knob. *Thurston*.
 124. *O. corniculata*, L. Var. *stricta*, Sav. Very common.

IMPATIENS, L.

JEWEL-WEED.

125. *I. pallida*, Nutt. PALE TOUCH-ME-NOT. Nay Aug. *Dudley*. Common about Kingston. *Thurston*.
 126. *I. fulva*, Nutt. Common.

21. RUTACEÆ.

XANTHOXYLUM, L.

127. *X. Americanum*, Mill. PRICKLY ASH. Near Dalton. *Dudley*.

22. SIMARUBACEÆ.

AILANTHUS, DESF.

TREE OF HEAVEN.

128. *A. glandulosus*, Desf. Escaped near the School House below Lackawanna Station. *Dudley*. From China.

23. ILICINEÆ.

ILEX, L.

HOLLY.

129. *I. monticola*, Gray. Near Archbald. *Davis*. S. E. of Dunmore; Moosic L.; Lake Henry; Elk Mt.; Sugar Loaf Mt.; Pocono Summit. *Dudley*.
 130. *I. mollis*, Gray. Frequent near Archbald. *Davis*. Near Lehigh Pond. *Dudley*.
 131. *I. verticillata*, Gray. BLACK ALDER. WINTER-BERRY. Swamps throughout. Its red fruit is very noticeable in late autumn.
 132. *I. lævigata*, Gray. Head of Little Roaring Brook; Lehigh Pond; Pocono Summit; rare in Pennsylvania. *Dudley*.

NEMOPANTHES, RAF.

MOUNTAIN HOLLY.

133. *N. fascicularis*, Raf. (*N. Canadensis*, Man. 5th ed.) Head of Little Roaring Brook; Pocono Summit, abundant; Lehigh Pond; Lake Henry; Moosic L.; Atherton's Pond, Dalton. *Dudley*. Near Archbald. *Davis*.

24. CELASTRACEÆ.

CELASTRUS, L.

134. *C. scandens*, L. BITTER-SWEET. Rather common about Kingston. *Thurston*. Campbell's Ledge, Duryea, etc. *Dudley*.

25. RHAMNACEÆ.

CEANOTHUS, L.

135. *C. Americanus*, L. JERSEY TEA. Common in dry, rocky woods.

26. VITACEÆ.

VITIS, TOURN.

GRAPE.

136. *V. Labrusca*, L. FOX-GRAPE. South of Wilkes-Barre; Lower Lackawanna Valley; Capouse. *Dudley*. Not rare in Wyoming Valley. *Thurston*. The original of the Concord, Catawba, etc.
137. *V. æstivalis*, Michx. SUMMER FROST GRAPE. Frequent.
138. *V. riparia*, Michx. (*V. cordifolia*, var. *riparia* Gray. 5th ed. Man.) Flats opp. Wilkes-Barre.

AMPELOPSIS, MICHX.

VIRGINIAN CREEPER.

139. *A. quinquefolia*, Michx. Common.

27. SAPINDACEÆ.

ÆSCULUS, L.

140. *Æ. HIPPOCASTANUM*, L. HORSE-CHESTNUT. Cultivated; rarely escaping.

ACER, TOURN.

141. *A. Pennsylvanicum*, L. STRIPED MAPLE. Elk Hills; Bald Mt.; Shickshinny; Lake Henry. *Dudley*. Near Kingston; cliff opp. Campbell's Ledge. *Thurston*.
142. *A. spicatum*, Lam. MOUNTAIN MAPLE. Bald Mt. *Dudley*. Above Luzerne. *Thurston*. Common about Archbald. *Davis*.
143. *A. saccharinum*, Wang. SUGAR MAPLE. Frequent.
144. *A. dasycarpum*, Ehrh. SILVER MAPLE. Abundant along the Susquehanna.
145. *A. rubrum*, L. RED MAPLE. Common.

NEGUNDO, MOENCH.

146. *N. ACEROIDES*, Moench. Said by Mr. J. H. Fisher to be in Wayne Co. Not reported within limits, but ought to be found along the Susquehanna.

STAPHYLEA, L.

BLADDER-NUT.

147. *S. trifolia*, L. Near Kingston. *Thurston*.

28. ANACARDIACEÆ.

RHUS, L.

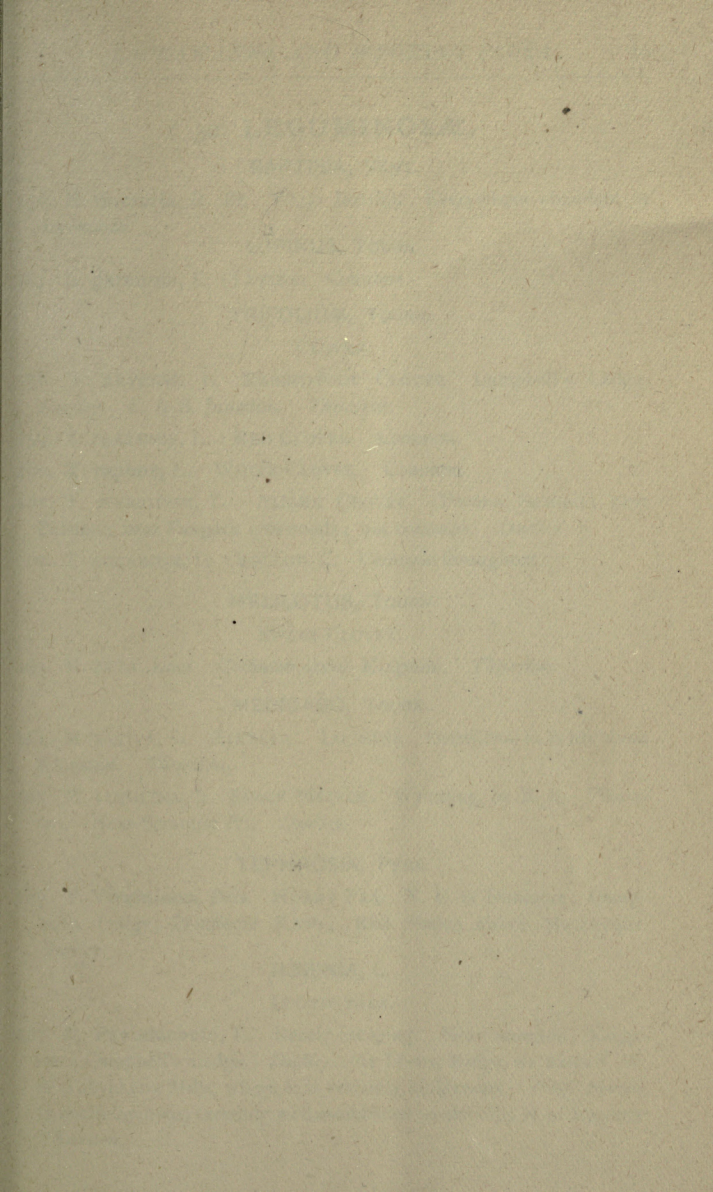
SUMACH.

148. *R. typhina*, L. STAGHORN SUMACH. Common.
149. *R. glabra*, L. SMOOTH SUMACH. Common.
150. *R. copallina*, L. Frequent.
151. *R. venenata*, DC. POISON SUMACH. Swamp, above Gouldsboro. *Dudley*. Lily Lake. *Davis*.
152. *R. Toxicodendron*, L. POISON IVY. POISON OAK. Common.

29. POLYGALACEÆ.

POLYGALA, TOURN.

153. *P. paucifolia*, Willd. FRINGED POLYGALA. Common.
154. *P. sanguinea*, L. Fields back of Plainsville. *Davis*. Kingston. *Thurston*.
155. *P. verticillata*, L. Near Wilkes-Barre; L. & B. Junction. *Dudley*. Kingston. *Thurston*. Var. *ambigua*, Watson. (*Polygala ambigua*, Nutt.) On ledges of red shale above Mocanaqua. *Dudley*.



30. LEGUMINOSÆ.

BAPTISIA, VENT.

156. *B. tinctoria*, R. Br. WILD INDIGO. Everywhere abundant in dry woods.

LUPINUS, TOURN.

157. *L. perennis*, L. LUPINE. Common.

TRIFOLIUM, TOURN.

CLOVER.

158. *T. ARVENSE*, L. RABBIT-FOOT CLOVER. Campbell's Ledge. *Dudley*. L. & B. Junction. *Thurston*.
 159. *T. PRATENSE*, L. RED CLOVER. Common.
 160. *T. repens*, L. WHITE CLOVER. Common.
 161. *T. HYBRIDUM*, L. ALSIKE CLOVER. Pocono Summit; near Pittston; near Paupack crossroads; not common. *Dudley*.
 162. *T. AGRARIUM*, L. YELLOW C. Common throughout.

MELILOTUS, TOURN.

SWEET CLOVER.

163. *M. ALBA*, Lam. Common about Kingston. *Thurston*.

MEDICAGO, TOURN.

164. *M. SATIVA*, L. ALFALFA. LUCERNE. Occasional in fields about Kingston. *Thurston*.
 165. *M. LUPULINA*, L. BLACK MEDICK. Wyoming, by R. R. *Thurston*. Near Scranton (?). *Dudley*.

TEPHROSIA, PERS.

166. *T. Virginiana*, Pers. HOARY PEA. N. E. of Dunmore; Campbell's Ledge; Penobscot Knob; Red Shales above Mocanaqua. *Dudley*.

ROBINIA, L.

LOCUST-TREE.

167. *R. Pseudacacia*, L. Rarely escaping. Near Scranton; Kingston; Campbell's Ledge. *Dudley*. At Locust Ridge, six miles S. W. of Tobyhanna Mills, where it is certainly indigenous. *Prof. Porter*. If not indigenous, certainly well established on the hills N. of Luzerne. *Thurston*.

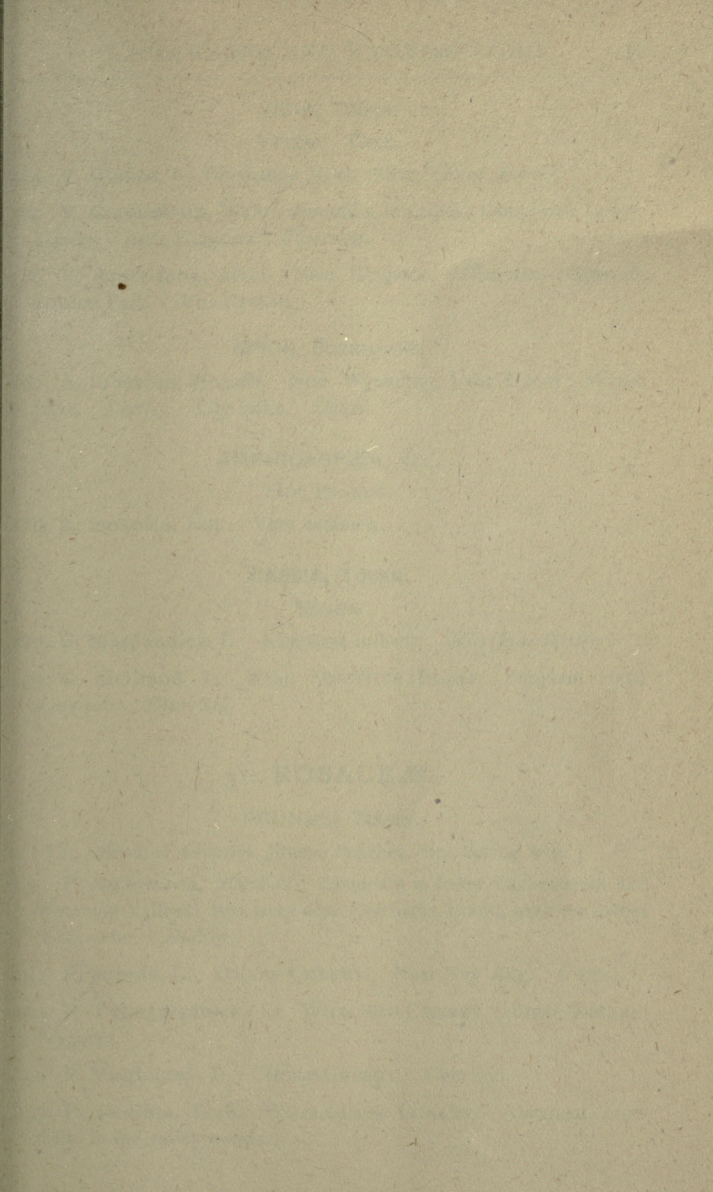
DESMODIUM, DESV.

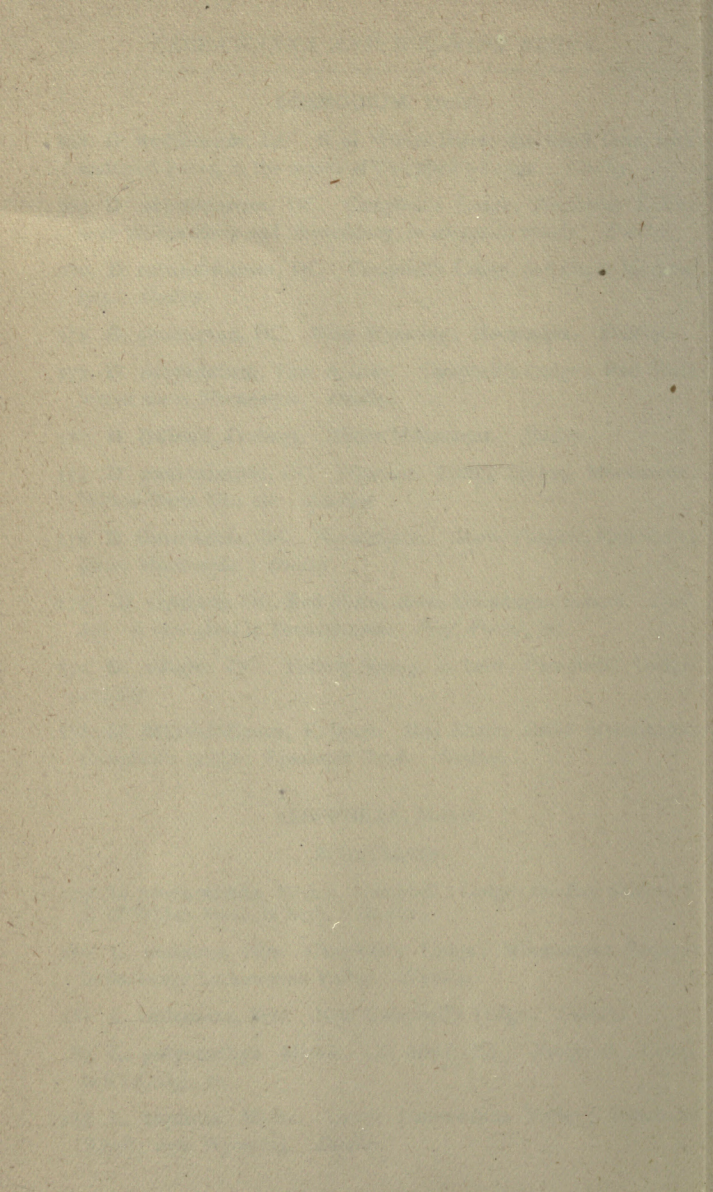
168. *D. nudiflorum*, DC. S. of Wilkes-Barre; the small form, with scattered leaves, in the woods of Campbell's Ledge. *Dudley*.
169. *D. acuminatum*, DC. Campbell's Ledge; Penobscot Knob; near Wilkes-Barre and Shickshinny, in mountain woods. *Dudley*.
170. *D. rotundifolium*, DC. Campbell's Ledge, and above Mocanaqua. *Dudley*.
171. *D. canescens*, DC. Near Wyoming; Mocanaqua. *Dudley*.
172. *D. cuspidatum*, Torr. & Gray. Campbell's Ledge; Red Shale ledges above Mocanaqua. *Dudley*.
173. *D. Dillenii*, Darlingt. Above Mocanaqua. *Dudley*.
174. *D. paniculatum*, DC. Frequent. Falling Spring; Mocanaqua; Wilkes-Barre Mt., etc. *Dudley*.
175. *D. Canadense*, DC. Not common. Above Pittston; Red Shales above Mocanaqua. *Dudley*.
176. *D. rigidum*, DC. Red Shales above Mocanaqua, in herb. *Dudley*. A rare plant in Pennsylvania. *Prof. Porter*, '87.
177. *D. ciliare*, DC. Falling Spring, in herb; Campbell's Ledge. *Dudley*.
178. *D. Marilandicum*, F. Boott. Red Shales above Mocanaqua; Campbell's Ledge; Penobscot Knob. *Dudley*.

LESPEDEZA, MICHX.

BUSH-CLOVER.

179. *L. procumbens*, Michx. Campbell's Ledge; the Red Shales; S. E. of Wilkes-Barre, in herb. *Dudley*.
180. *L. violacea*, Pers. Campbell's Ledge; Mocanaqua; frequent in the lower Lackawanna Valley. *Dudley*.
181. *L. reticulata*, Pers. Near Campbell's Ledge. *Dudley*.
182. *L. polystachya*, Michx. (*L. hirta*, Ell.) Frequent. Campbell's Ledge, etc.
183. *L. capitata*, Michx. Lower Lackawanna Valley; Penobscot Knob; near Wyoming. *Dudley*.





VICIA, TOURN.

VETCH. TARE.

184. *V. Cracca*, L. Tobyhanna Mills, 1881. *Prof. Porter.*
 185. *V. Caroliniana*, Walt. Mountain Inn road; Campbell's Ledge.
Dudley. Near Kingston. *Thurston.*
 186. *V. Americana*, Muhl. Near Kingston. *Thurston.* Opposite
 Pittston Park. *Miss Carlson.*

APIOS, BOERHAAVE.

187. *A. tuberosa*, Moench. Near Wyoming; Lake Henry; Moosic
 Lake. *Dudley.* Lily Lake. *Davis.*

AMPHICARPÆA, ELL.

HOG PEANUT.

188. *A. monoica*, Nutt. Very common.

CASSIA, TOURN.

SENNA.

189. *C. Marilandica*, L. Kingston, in herb. *Miss Josie Stadler.*
 190. *C. nictitans*, L. WILD SENSITIVE PLANT. Frequent about
 Kingston. *Thurston.*

31. ROSACEÆ.

PRUNUS, TOURN.

[The cultivated Cherries, Plums, Peaches, etc., belong here.]

191. *P. Americana*, Marshall. Abundant in lower Lackawanna and
 Wyoming Valleys; two trees near Everhart's Island, each ten inches
 in diameter. *Dudley.*
 192. *P. pumila*, L. DWARF CHERRY. Near Nay Aug. *Graves.*
 193. *P. Pennsylvanica*, L. WILD RED CHERRY. BIRD CHERRY.
 Frequent.
 194. *P. Virginiana*, L. CHOKE-CHERRY. Common.
 195. *P. serotina*, Ehrh. WILD BLACK CHERRY. Abundant, espe-
 cially in the valley woods.

SPIRÆA, L.

196. *S. salicifolia*, L. COMMON MEADOW-SWEET. Abundant in both valleys.
197. *S. tomentosa*, L. HARDHACK. Very abundant about Carbon-dale and the damp gravelly pastures, northern part of valley; fewer in lower Lackawanna and Wyoming Valleys, though quite abundant in a swamp near Broderick's. *Dudley*.

PHYSOCARPUS, MAXIM.

198. *P. opulifolius*, Maxim. NINE-BARK. Above Coxton along the Susquehanna; near the old track of D., L. & W. R. R. in lower Lackawanna Valley. *Dudley*. Occasional about Kingston. *Thurston*.

GILLENIA, MOENCH.

199. *G. trifoliata*, Moench. Campbell's Ledge; Penobscot Knob; Mountain Inn road; Mocanaqua. *Dudley*. Near Kingston. *Thurston*. Near W. Pittston. *Miss Carlson*.

RUBUS, TOURN.

200. *R. odoratus*, L. PURPLE FLOWERING-RASPBERRY. (Often incorrectly called Mulberry.) At Nay Aug; Campbell's Ledge; Mocanaqua; above Legget's Gap. *Dudley*. Near Kingston. *Thurston*.
201. *R. strigosus*, Michx. RED-RASPBERRY. Common, especially on the mountains.
202. *R. occidentalis*, L. BLACKCAP RASPBERRY. THIMBLEBERRY. Frequent.
203. *R. neglectus*, Pk. (An apparent hybrid between *R. occidentalis*, L., and *R. strigosus*, Michx. See Manual, p. 155.) Lower Lackawanna Valley; Mocanaqua, in herb.; also in herb. of R. N. Davis. *Dudley*.
204. *R. villosus*, Ait. HIGH BLACKBERRY. Common.
205. *R. Canadensis*, L. DEWBERRY. Common.
206. *R. hispidus*, L. SWAMP BLACKBERRY. Swamp at head of Little Roaring Brook; Lehigh P., abundant; L. Henry, frequent; near Dickson Station. *Dudley*.

DALIBARDA, L.

207. *D. repens*, L. Swamp at head of Little Roaring Brook; L. Henry; near Lehigh P.; above Gouldsboro. *Dudley*.

GEUM, L.

AVENS.

208. *G. album*, Gmelin. Lower Lackawanna Valley. *Dudley*. Not rare in Wyoming Valley. *Thurston*.
209. *G. Virginianum*, L. Campbell's Ledge; near road from Paupack to Moosic L.; occasional in Wyoming Valley. *Dudley*.
210. *G. strictum*, Ait. Tobyhanna Mills. *Prof. Porter*.

WALDSTEINIA, WILLD.

211. *W. fragarioides*, Tratt. BARREN STRAWBERRY. Near Scranton. *Mrs. Buell*. Near Archbald. *Davis*. Near Nanticoke; Luzerne; Ransom. *Thurston*.

FRAGARIA, TOURN.

212. *F. Virginiana*, Mill. WILD STRAWBERRY. Common.
213. *F. vesca*, L. In woods, common.

POTENTILLA, L.

CINQUE-FOIL. FIVE-FINGER.

214. *P. arguta*, Pursh. Top of Campbell's Ledge, in herb. *Dudley*. Rare in Pennsylvania, only reported from the Susquehanna below Harrisburg, and the Delaware near Easton. *Prof. Porter*, '87.
215. *P. Norvegica*, L. Common.
216. *P. argentea*, L. SILVERY CINQUE-FOIL. Campbell's Ledge. *Dudley*. W. Pittston. *Miss Carlson*. Occasional in Wyoming Valley. *Thurston*.
217. *P. palustris*, Scop. MARSH CINQUE-FOIL. Wyoming Swamp, abundant; Lehigh P., in herb.; L. Henry, abundant; Ararat Marsh. *Dudley*. Swamp near Kingston. *Thurston*.
In '87 Prof. Porter quoted it from but one station in Pennsylvania, in Pike Co.
218. *P. tridentata*, Ait. "Lookout Ledges" on Bald Mt., 1886, in herb.; Penobscot Knob Summit. *Dudley*.
The specimens obtained on Bald Mt. in '86 by Prof. Dudley were the first observed in Pennsylvania.
219. *P. Canadensis*, L. COMMON CINQUE-FOIL. FIVE-FINGER. Both forms common. (See Manual, p. 160.)

ROSA, TOURN.

ROSE.

220. *R. setigera*, Michx. PRAIRIE R. By road N. of Taylorville. A doubtful specimen. *Dudley*.
221. *R. blanda*, Ait. Near Kingston, in herb. *Thurston*.
222. *R. Carolina*, L. Not uncommon in swamps, on islands, etc.
223. *R. humilis*, Marsh. (See 6th ed. Man., p. 163.) Frequent, especially in mountain woods. Penobscot Knob. *Dudley*. W. Pittston. *Miss Carlson*.
224. *R. RUBIGINOSA*, L. SWEETBRIER. Frequent.
225. *R. CANINA*, L. DOG ROSE. A single plant toward the river below Forty Fort; another by road at base of cliff opp. Campbell's Ledge.

PYRUS, L.

PEAR. APPLE.

226. *P. MALUS*, L. APPLE. Wild in lower Lackawanna Valley. *Dudley*. Very many varieties in cultivation.
227. *P. COMMUNIS*. COMMON PEAR. Cultivated.
228. *P. coronaria*, L. WILD CRAB APPLE. Frequent throughout.
229. *P. arbutifolia*, L. CHOKE-BERRY. (Fruit red.) Rather common. Var. *melanocarpa*, Hook. (Fruit black.) Near Atherton's Pond. *Dudley*.
230. *P. Americana*, DC. MOUNTAIN ASH. Bald Mt.; Pocono Summit; Lehigh Pond, in herb. *Dudley*. Above Luzerne. *Thurston*.
231. *P. sambucifolia*, Cham. & Schlecht. Near Luzerne, apparently spontaneous; in herb. *Thurston*.

CRATÆGUS, L.

HAWTHORN.

232. *C. OXYACANTHA*, L. ENGLISH H. Escaped to roadside, several shrubs, N. of Dundaff. *Dudley*. Hitherto escaped in Penn'a, only near Phila. *Prof. Porter*.
233. *C. coccinea*, L. SCARLET THORN. Frequent throughout. At Penobscot Knob specimens noticed with leaves cuneate at base. *Dudley*. Var. *macracantha*, *Dudley*. (See Man., p. 165; also Cayuga Flora, p. 33.) Duryea; S. of Wilkes-Barre; lower Lackawanna Valley. *Dudley*.

234. *C. tomentosa*, L. BLACK THORN. Lower Lackawanna Valley, etc. *Dudley*.
235. *C. punctata*, Jacq. (*C. tomentosa*, var. *punctata*, Gray.) Duryea; near Wilkes-Barre; Mountain Inn Road. *Dudley*.
236. *C. Crus-galli*, L. COCKSPUR THORN. S. E. of Wilkes-Barre. *Dudley*.

AMELANCHIER, MEDIC.

JUNE-BERRY. SHADBUSH.

237. *A. Canadensis*, Torr. & Gray. Common. The broad-leaved variety (var. *rotundifolia*, Torr. & Gray) is somewhat common about Kingston. *Thurston*. Bald Mt.; Penobscot Knob; Mocanaqua; Campbell's Ledge. *Dudley*.

32. SAXIFRAGACEÆ.

SAXIFRAGA, L.

SAXIFRAGE.

238. *S. Virginiensis*, Michx. EARLY S. Common on rocks.
239. *S. Pennsylvanica*, L. SWAMP S. Near Kingston. *Thurston*.

TIARELLA, L.

FALSE MITRE-WORT.

240. *T. cordifolia*, L. Near Scranton. *Mrs. Buell* and *Mrs. Beeber*. Woods near Lake Henry. *Dudley*. Near Harvey's Lake. *Thurston*.

MITELLA, Tourn.

BISHOP'S-CAP.

241. *M. diphylla*, L. Frequent.
242. *M. nuda*, L. Swamp on Pocono Mt.; N. E. of Tobyhanna. *Dudley*. "Rare in Pennsylvania." *Prof. Porter*.

CHRYSOSPLENIUM, Tourn.

GOLDEN SAXIFRAGE.

243. *C. Americanum*, Schwein. Spring Brook near Archbald "pot holes;" Lehigh Pond; Pocono Summit Spring. *Dudley*.

HYDRANGEA, Gronov.

244. *H. arborescens*, L. WILD H. Frequent in Lackawanna and Wyoming Valleys and up the mountain streams.

RIBES, L.

CURRANT. GOOSEBERRY.

245. *R. Cynosbati*, L. PRICKLY GOOSEBERRY. Elk Hills; a few on sandstone ledges above Taylorville; by road from Paupack cross roads to Moosic Lake. *Dudley*.
246. *R. rotundifolium*, Michx. Campbell's Ledge cliffs; Red Shales near Mocanaqua. *Dudley*.
247. *R. prostratum*, L'Her. FETID CURRANT. Swamp above Gouldsboro; Pocono Summit Spring. *Dudley*.
248. *R. RUBRUM*, L. RED GARDEN CURRANT. Rare as a scape; in herb. *Davis*. Ashley Planes. *Thurston*.
249. *R. floridum*, L'Her. BLACK C. Plainsville, in herb. *Davis*. Below Scranton. *Dudley*. Perhaps indigenous.

33. CRASSULACEÆ.

PENTHORUM, GRONOV.

250. *P. sedoides*, L. DITCH STONE-CROP. Common.

SEDUM, TOURN.

STONE-CROP.

251. *S. TELPHIUM*, L. LIVE-FOR-EVER. E. of Wyoming; Nay Aug ravine; near Maplewood via E. & W. R. R. *Dudley*.

34. DROSERACEÆ.

DROSER, L.

SUNDEW.

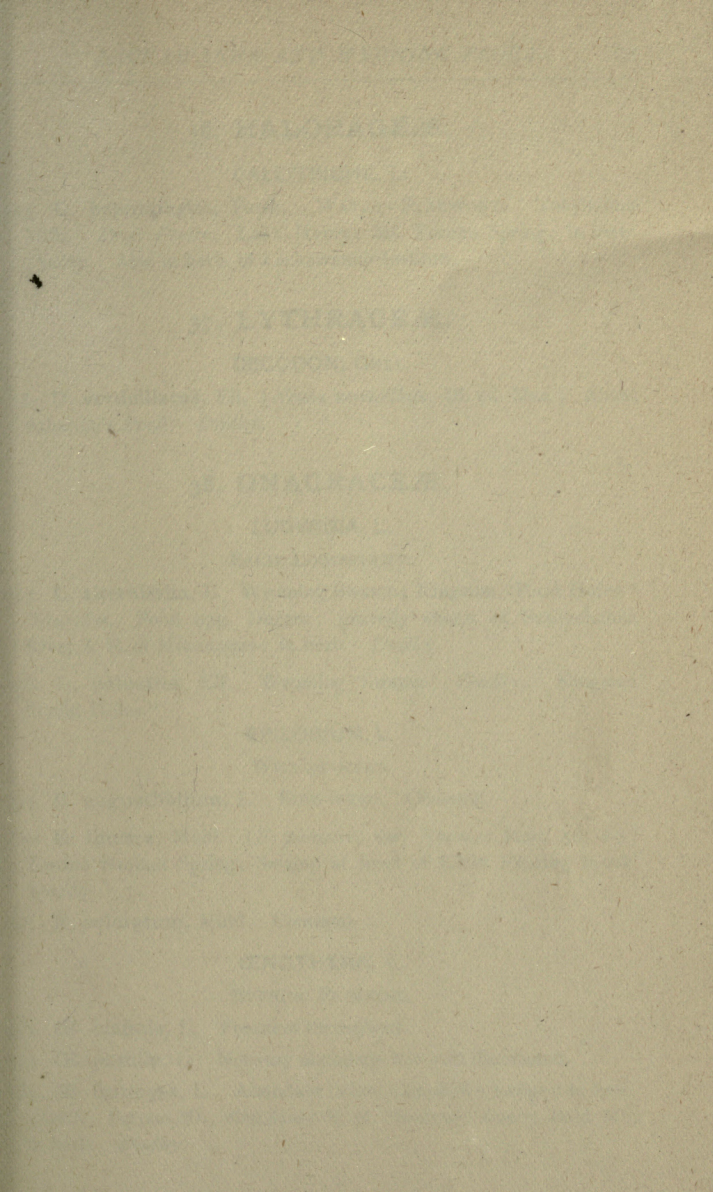
252. *D. rotundifolia*, L. Moosic Mt.; Moosic Lake; Lehigh Pond; Pocono Summit Spring; none at Lake Henry. *Dudley*.
253. *D. intermedia*, Hayne. Var. *Americana*, DC. In bog about Lehigh Pond; leaves in herb.; Sinkhole Marsh near Ararat. *Dudley*.

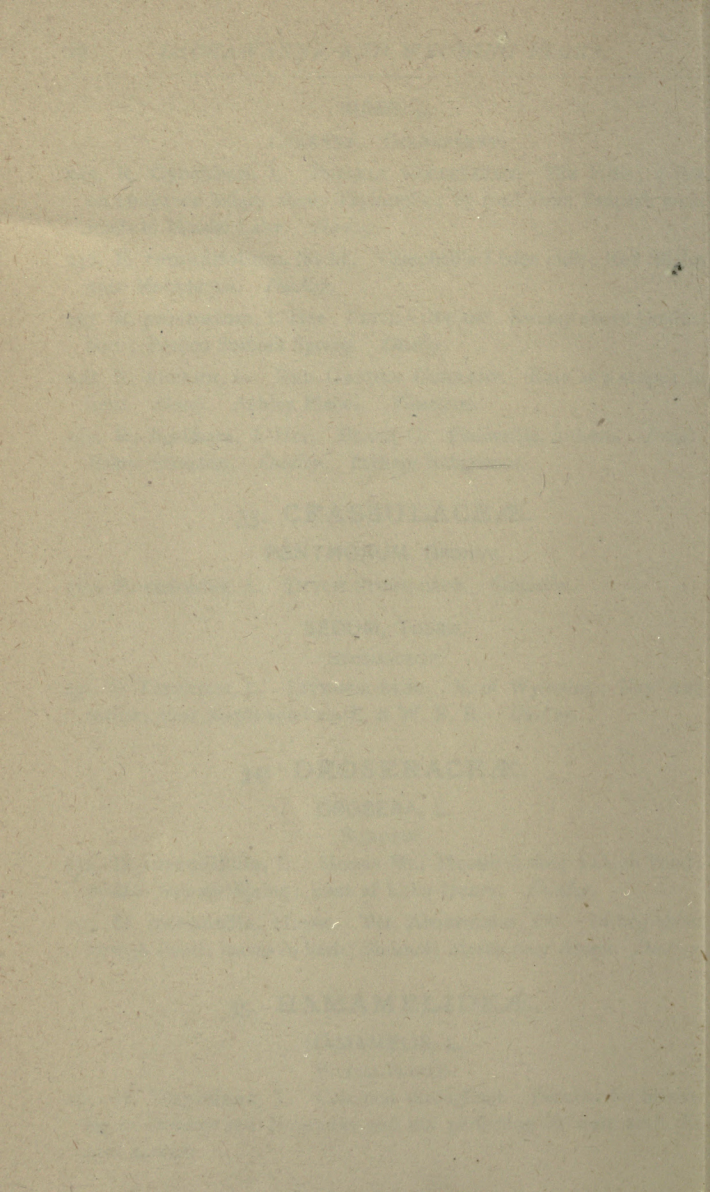
35. HAMAMELIDEÆ.

HAMAMELIS, L.

WITCH-HAZEL.

254. *H. Virginiana*, L. Common throughout. Peculiar for blooming in October and November and not perfecting its fruit until the next autumn.





36. HALORAGEÆ.

CALLITRICHE, L.

255. *C. heterophylla*, Pursh. WATER - STARWORT. Tobyhanna Mills. *Prof. Porter*. Lake Henry; Mt. Pocono Spring; in herb. *Dudley*. Also in herb. of Lackawanna Institute.

37. LYTHRACEÆ.

DECODON, GMEL.

256. *D. verticillatus*, Ell. (*Nesaea verticillata*, 5th ed. Man.) About Atherton's Pond. *Dudley*.

38. ONAGRACEÆ.

LUDWIGIA, L.

FALSE LOOSESTRIPE.

257. *L. alternifolia*, L. Wyoming Swamp; Kingston "Pond Holes." *Thurston*. Pond opp. Duryea; gravelly shores of Susquehanna River S. E. of Mocanaqua; in herb. *Dudley*.
258. *L. palustris*, Ell. Wyoming Swamp. *Dudley*. Kingston "Pond Holes."

EPILOBIUM, L.

WILLOW-HERB.

259. *E. angustifolium*, L. FIRE-WEED. Common.
260. *E. lineare*, Muhl. (*E. palustre*, var. *lineare*, Man. 5th ed.) Pocono Summit Spring; Swamp at head of Little Roaring Brook. *Dudley*.
261. *E. coloratum*, Muhl. Common.

CENOTHERA, L.

EVENING PRIMROSE.

262. *C. biennis*, L. Frequent throughout.
263. *C. pumila*, L. Not very abundant but well distributed.
264. *C. fruticosa*, L. Abundant below Campbell's Ledge; in herb. *Davis*. Pocono Mt., abundant; E. of Penobscot Knob; Bald Mt.; in herb. *Dudley*.

GAURA, L.

265. *G. biennis*, L. Frequently seen in Wyoming Valley.

CIRCÆA, TOURN.

ENCHANTER'S NIGHTSHADE.

266. *C. Lutetiana*, L. Frequent.
267. *C. alpina*, L. Common near Archbald. *Davis*. Tompkinsville. *Graves*. Tilbury Knob. *Thurston*. Swamp near Mountain Inn; Lehigh Pond; Scott Township Road; tops of river mountains. *Dudley*.

39. CUCURBITACEÆ.

[The Squash, Pumpkin, Gourd, Melon, Cucumber, etc., are of this family.]

SICYOS, L.

268. *S. angulatus*, L. STAR CUCUMBER. Waste places. Wilkes-Barre and lower Lackawanna Valley. *Dudley*. Kingston "Pond Holes." *Thurston*.

ECHINO CYSTIS, TORR. & GRAY.

269. *E. lobata*, Torr. & Gray. WILD BALSAM-APPLE. Frequent near Kingston, by the "Pond Holes" and near the river. *Thurston*.

40. FICOIDEÆ.

MOLLUGO, L.

270. *M. VERTICILLATA* L. CARPET-WEED. Rather frequent.

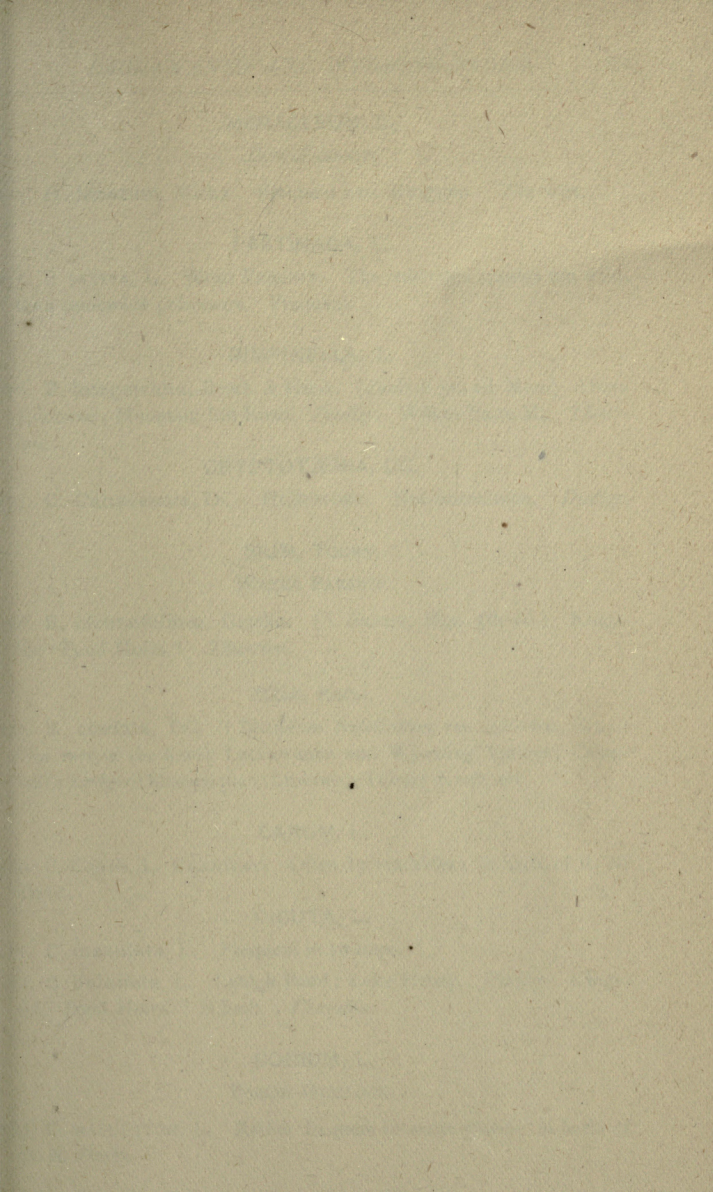
41. UMBELLIFERÆ.

DAUCUS, TOURN.

271. *D. CAROTA*, L. WILD CARROT. Abundant in both valleys.

ANGELICA, L.

272. *A. hirsuta*, Muhl. (*Archangelica hirsuta*, 5th ed. Man.) Campbell's Ledge; Penobscot Knob; near Mocanaqua; Moosic Lake, etc. *Dudley*.
273. *A. atropurpurea*, L. (*Archangelica atropurpurea*, 5th ed. Man.) Near pond in lower Lackawanna Valley; near Pittston. *Dudley*.



HERACLEUM, L.

COW-PARSNIP.

274. *H. lanatum*, Michx. Frequent near Kingston. *Thurston*.

PASTINACA, L.

275. *P. SATIVA*, L. WILD PARSNIP. The cultivated species run wild, then somewhat poisonous. Frequent.

PIMPINELLA, L.

276. *P. integerrima*, Benth. & Hook. (*Zizia* of 5th ed. Man.) Above Dunmore; Mountain Inn Road. *Dudley*. Wilkes-Barre Mt. *Thurston*.

CRYPTOTÆNIA, DC.

277. *C. Canadensis*, DC. HONEWORT. Not uncommon. *Dudley*.

SIUM, TOURN.

WATER PARSNIP.

278. *S. cicutæfolium*, Gmelin. (*S. lineare*, Man. 5th ed.) Kingston "Pond Holes." *Thurston*.

ZIZIA, KOCH.

279. *Z. cordata*, DC. (*Thaspium trifoliatum* var. *apterum*, Gray.) Not rare in the lower Lackawanna and Wyoming Valleys; Campbell's Ledge; Mocanaqua; Luzerne; Tilbury Knob, etc.

CARUM, L.

280. *C. CARUI*, L. CARAWAY. Often by roadsides; in herb. of R. N. Davis.

CICUTA, L.

281. *C. maculata*, L. Frequent in swamps.
282. *C. bulbifera*, L. Lehigh Pond; Lake Henry. *Dudley*. Kingston "Pond Holes;" in herb. *Thurston*.

CONIUM, L.

POISON HEMLOCK.

283. *C. MACULATUM*, L. Rather frequent in waste places; in herb. of R. N. Davis.

CHÆROPHYLLUM, L.

284. *C. procumbens*, Crantz. Abundant by river near Kingston. *Thurston*.

OSMORRHIZA, RAF.

SWEET CICELY.

285. *O. brevistylis*, DC. HAIRY S. C. Lynn, in herb. *Davis*. Mountain Inn Road. *Dudley*. Frequent about Kingston. *Thurston*.
 286. *O. longistylis*, DC. SMOOTH S. C. Near Kingston. *Thurston*.

HYDROCOTYLE, TOURN.

287. *H. Americana*, L.. Above Dunmore; Nay Aug; Lehigh Pond. *Dudley*. Rather common in Wyoming Valley. *Thurston*.

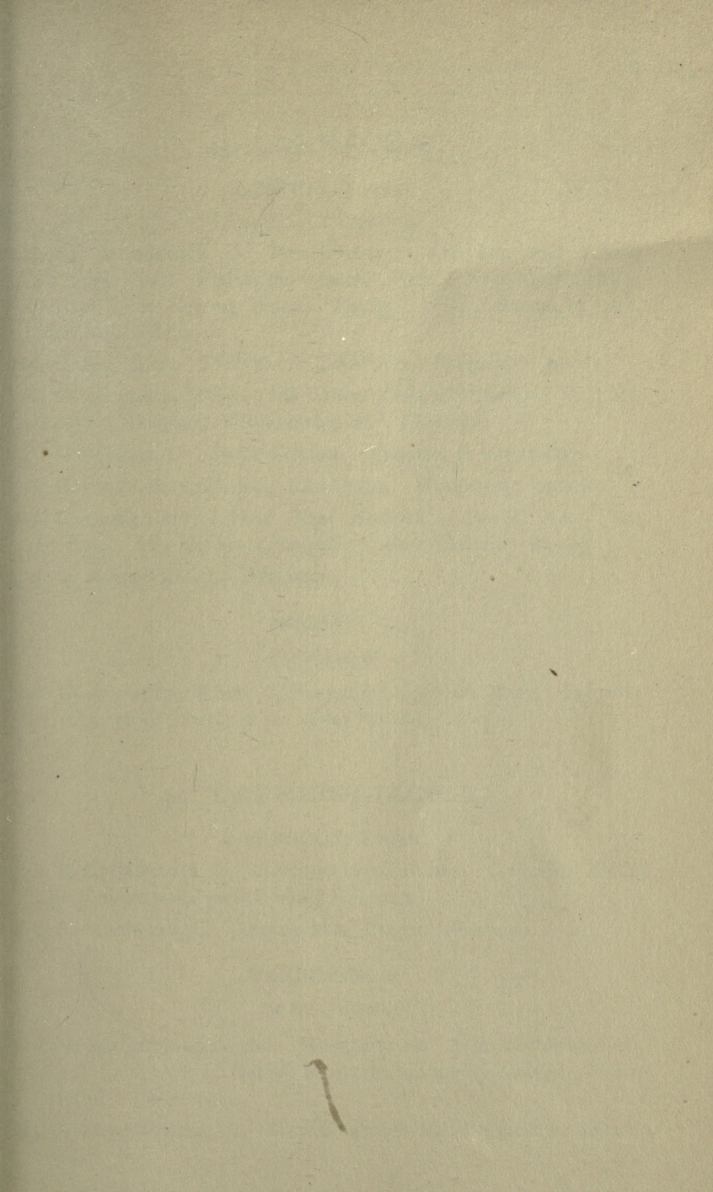
SANICULA, TOURN.

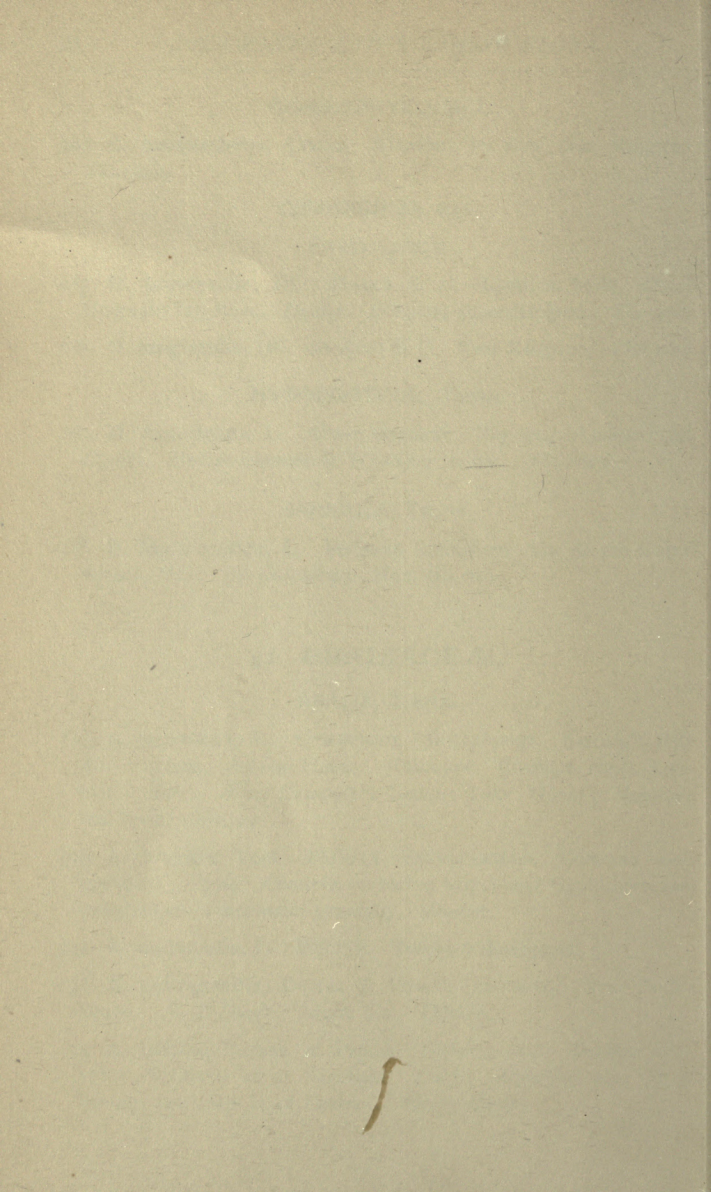
288. *S. Marylandica*, L. Frequent throughout; also its var. *Canadensis*, Torr. (*S. Canadensis*, Man. 5th ed.)

42. ARALIACEÆ.

ARALIA, TOURN.

289. *A. racemosa*, L. SPIKENARD. WHITEROOT. Slocum's Hill. *Miss Carlson*. Ashley Planes. *Thurston*. Common about Archbald. *Davis*. Near Campbell's Ledge; Lake Henry; Mountain Inn Road. *Dudley*.
 290. *A. hispida*, Vent. BRISTLY SARSAPARILLA. Common near Archbald. *Davis*. Common on barren ledges near Gouldsboro, and rocky slopes of mountains generally. *Dudley*.
 291. *A. nudicaulis*, L. WILD S. Frequent throughout.
 292. *A. quinquefolia*, Decsne. & Planch. GINSENG. Near Clark's Green. *N. S. Davis*. Ararat Mt. *Dudley*.
 293. *A. trifolia*, Decsne. & Planch. GROUND-NUT. DWARF GINSENG. Common about Archbald. *Davis*. Abundant near Moss' Swamp, two miles N. of Luzerne. *Harry Camp*.





43. CORNACEÆ.

CORNUS, TOURN.

CORNEL. DOGWOOD.

294. *C. Canadensis*, L. BUNCH-BERRY. Abundant near Moosic Mt. *Mrs. Buell*. Plainsville, in herb. *Davis*. Near Moosic Lake; head of Little Roaring Brook. *Dudley*. Near Lehman, in herb. *Miss May Whiteman*.
295. *C. florida*, L. FLOWERING DOGWOOD. Frequent in woods.
296. *C. circinata*, L'Her. Elk Hills; Campbell's Ledge; Bald Mt. *Dudley*. Kingston; Wilkes-Barre Mt. *Thurston*.
297. *C. sericea*, L. SILKY CORNEL. Frequent in low thickets.
298. *C. stolonifera*, Michx. RED OSIER. Wet places; common.
299. *C. paniculata*, L'Her. Near Archbald. *Davis*. Near Pittston Park. *Miss Carlson*. Duryea; Pocono Summit. *Dudley*.
300. *C. alternifolia*, L. Frequent.

NYSSA, L.

PEPPERIDGE.

301. *N. sylvatica*, Marsh. (*N. multiflora*, 5th ed. Man.) Frequent in rocky woods; rarely in the valley bottoms. *Dudley*.

44. CAPRIFOLIACEÆ.

SAMBUCUS, TOURN.

302. *S. Canadensis*, L. BLACK-BERRIED ELDER. Common. Abundant in moist waste ground about Kingston.
303. *S. racemosa*, L. RED-BERRIED ELDER. Frequent.

VIBURNUM, L.

ARROW-WOOD.

304. *V. lantanoides*, Michx. HOBBLE BUSH. Near Archbald "pot-hole;" Lehigh P.; L. Henry; Mountain Inn road. *Dudley*. Above Luzerne. *Thurston*.
305. *V. acerifolium*, L. MAPLE-LEAVED V. Frequent in upland woods.

306. *V. pubescens*, PURSH. Elk Mountain. *Dudley*.
 307. *V. dentatum*, L. Frequent in low ground.
 308. *V. cassinoides*, L. (*V. nudum*, var. *cassinoides*, Man. 5th ed.)
 WITHE-ROD. Head of Little Roaring Brook; in swamps about
 Gouldsboro; Moosic Lake; Pocono Summit; common near L. Henry.
Dudley.
 309. *V. Lentago*, L. SWEET V. Common.

TRIOSTEUM, L.

HORSE-GENTIAN.

310. *T. perfoliatum*, L. Near Peckville, by gravity track; Clark's
 Green. *Davis*. Along Huntsville Creek. *Thurston*.

LINNÆA, GRONOV.

TWIN-FLOWER.

311. *L. borealis*, L. (The favorite plant of the immortal Linnæus,
 and named for him.) Near Dunmore Cemetery; scarce. *Mrs.*
Buell. "Found in Sullivan, Lycoming and Tioga counties." *Prof*
Porter.

LONICERA, L.

HONEYSUCKLE.

312. *L. ciliata*, Muhl. FLY-HONEYSUCKLE. On the Pocono. *Prof.*
Porter. Above Luzerne. *Thurston*. Green Ridge. *Mrs. Beeber*.
 Elk Mt.; Campbell's Ledge; Nay Aug. *Dudley*.
 313. *L. cærulea*, L. MOUNTAIN F. First found in Pennsylvania at
 Naomi Pines, June, '89, by Prof. Porter.
 314. *L. glauca*, Hill. (*L. parviflora*, Lam., 5th ed. Man.) Frequent.

DIERVILLA, TOURN.

315. *D. trifida*, Moench. BUSH-HONEYSUCKLE. Frequent.
D. JAPONICA. (WEIGELA.) Cultivated.

45. RUBIACEÆ.

HOUSTONIA, L.

316. *H. cærulea*, L. BLUETS. INNOCENCE. WILD FORGET-ME-NOT.
 Common.
 317. *H. purpurea*, L. Var. *longifolia*, Gray. Tilbury Knob. *Thurs-*
ton.

CEPHALANTHUS, L.

318. *C. occidentalis*, L. BUTTON-BUSH. Frequent in marshes, etc.

MITCHELLA, L.

319. *M. repens*, L. PARTRIDGE-BERRY. Frequent.

GALIUM, L.

BEDSTRAW.

320. *G. Aparine*, L. CLEAVERS. Near Campbell's Ledge. *Dudley*.
Opp. Pittston Park. *Miss Carlson*. Not rare about Kingston.
Thurston.
321. *G. pilosum*, Ait. Opp. Pittston Park. *Miss Carlson*. Scott
Township road; Campbell's Ledge; Peat Swamp near Gouldsboro.
Dudley.
322. *G. circæzans*, Michx. Frequent.
323. *G. lanceolatum*, Torr. Frequent.
324. *G. trifidum*, L. SMALL BEDSTRAW. Lehigh Pond; Pocono
Summit. *Dudley*.
325. *G. asprellum*, Michx. Wyoming Swamp; near Lehigh Pond.
Dudley. Not rare in Wyoming Valley. *Thurston*.
326. *G. triflorum*, Michx. SWEET BEDSTRAW. Campbell's Ledge;
Mountain Inn road; Lehigh Pond; Lake Henry; Duryea. *Dudley*.

46. DIPSACEÆ.

DIPSACUS, TOURN.

TEASEL.

327. *D. sylvestris*, Mill. N. of Taylorville, apparently not common.
Dudley. Sent me from Herrick by J. L. Camp. *Thurston*.

47. COMPOSITÆ.

VERNONIA, SCHREB.

328. *V. noveboracensis*, Willd. IRON-WEED. Opposite Duryea,
near the pond. *Dudley*. Common in swamps about Kingston.
Thurston.

EUPATORIUM, TOURN.

329. *E. purpureum*, L. JOE-PYE WEED. Frequent.
 330. *E. sessilifolium*, L. Near Wyoming. *Dudley*.
 331. *E. perfoliatum*, L. BONESET. Frequent.
 332. *E. ageratoides*, L. WHITE SNAKE-ROOT. Frequent in rich woods.

SOLIDAGO, L. GOLDEN-ROD

333. *S. squarrosa*, Muhl. Near Campbell's Ledge; west side of Lackawanna Valley. *Dudley*. Wilkes-Barre Mt. *Thurston*.
 334. *S. cæsia*, L. Frequent.
 335. *S. latifolia*, L. Mountain Inn road; Solomon's Gap, S. of Wilkes-Barre. *Dudley*. Above Luzerne. *Thurston*.
 336. *S. bicolor*, L. Frequent. Var. *concolor*, Torr. & Gray. Woods at foot of Campbell's Ledge; Penobscot Knob. *Dudley*. Wilkes-Barre Mt. *Thurston*.
 337. *S. puberula*, Nutt. Mountains S. E. of Wilkes-Barre, in herb; Bald Mt.; near Solomon's Gap; abundant but local. *Dudley*.
 338. *S. uliginosa*, Nutt. (*S. stricta*, 5th ed. Man.) Near Lehigh Pond. *Dudley*.
 339. *S. odora*, Ait. SWEET-SCENTED GOLDEN-ROD. Frequent in rocky soil on the mountains.
 340. *S. rugosa*, Mill. (*S. altissima*, 5th ed. Man.) Frequent in both valleys.
 341. *S. ulmifolia*, Muhl. Woods near Campbell's Ledge. *Dudley*.
 342. *S. neglecta*, Torr. & Gray. "Near Pocono station, D. L. & W. R. R., 1869." *Prof. Porter*.
 343. *S. arguta*, Ait. (*S. Muhlenbergii*, Man. 5th ed.) Frequent on the mountains. *Dudley*.
 344. *S. juncea*, Ait. (*S. arguta*, Man. 5th ed.) Common. *Dudley*.
 345. *S. serotina*, Ait. (*S. gigantea*, Man. 5th ed.) Common in Wyoming and lower Lackawanna Valleys. *Dudley*.
 346. *S. Canadensis*, L. Common.
 347. *S. nemoralis*, Ait. Frequent. Abundant about Kingston.
 348. *S. lanceolata*, L. Frequent.

SERICOCARPUS, NEES.

349. *S. conyzoides*, Nees. WHITE-TOPPED ASTER. Wilkes-Barre Mt.; Campbell's Ledge; Mocanaqua. *Dudley*. Near Kingston. *Thurston*.

ASTER, L.

350. *A. corymbosus*, Ait. Common.
351. *A. macrophyllus*, L. Frequent throughout, in moist woods.
352. *A. radula*, Ait. Mentioned in the Manual, p. 257, as having been found on Pocono Mt.
353. *A. Novæ-Angliæ*, L. Not abundant, but well distributed over lower Lackawanna and Wyoming Valleys.
354. *A. patens*, Ait. Frequent along mountain roads and on dry banks.
355. *A. undulatus*, L. Frequent in mountain roads.
356. *A. cordifolius*, L. Common.
357. *A. lævis*, L. Lower Lackawanna Valley and elsewhere. *Dudley*. Wilkes-Barre Mt.; abundant. *Thurston*.
358. *A. concinnus*, Willd. Penobscot Knob; along the R. R. above Solomon's Gap; Fairview; local but abundant. *Dudley*.
359. *A. ericoides*, L. Lower Lackawanna and Wyoming Valleys.
360. *A. vimineus*, Lam. (*A. Tradescanti*, Man. 5th ed.) Bald Mt. probably frequent. *Dudley*.
361. *A. diffusus*, Ait. (*A. miser*, Man. 5th ed.) Frequent.
362. *A. paniculatus*, Lam. (*A. simplex*, Man. 5th ed.) Near Wyoming, Kingston, and in lower Lackawanna Valley. *Dudley*.
363. *A. prenanthoides*, Muhl. Near Waymart; by brook, E. from Ararat station. *Dudley*. Toby's Creek, above Luzerne. *Thurston*.
364. *A. puniceus*, L. Low grounds E. of Wilkes-Barre; along Black Creek; a smooth form in Spring Swamp, Pocono Summit. *Dudley*.
365. *A. umbellatus*, Mill. (*Diplopappus umbellatus*, 5th ed. Man.) Woods above Dunmore; by road E. of Paupack crossing, E. & W. R. R. *Dudley*.
366. *A. infirmus*, Michx. (*Diplopappus cornifolius*, 5th ed. Man.) Ledges along Mountain Inn road, in herb.; Campbell's Ledge; Ledges above Mocanaqua. *Dudley*.

367. *A. linariifolius*, L. (*Diplopappus linariifolius*, 5th ed. Man.)
Frequent on mountain declivities.

368. *A. acuminatus*, Michx. Frequent in ravines and mountain woods.

ERIGERON, L.

FLEABANE.

369. *E. Canadensis*, L. HORSE-WEED. Abundant.

370. *E. annuus*, Pers. TALL DAISY. Frequent.

371. *E. strigosus*, Muhl. DAISY FLEABANE. Frequent.

372. *E. bellidifolius*, Muhl. ROBIN'S PLANTAIN. Abundant in Wyoming Valley.

373. *E. Philadelphicus*, L. PINK FLEABANE. Not rare in Wyoming Valley.

ANTENNARIA, GAERTN.

374. *A. plantaginifolia*, Hook. PLANTAIN-LEAVED EVERLASTING.
Frequent in pastures.

ANAPHALIS, DC.

375. *A. margaritacea*, Benth. & Hook. (*Antennaria margaritacea*, Man., 5th ed.) PEARLY EVERLASTING. Frequent.

GNAPHALIUM, L.

CUDWEED.

376. *G. polycephalum*, Michx. Frequent in mountain woods.

377. *G. decurrens*, Ives. COMMON EVERLASTING. Tobyhanna, '81,
and Moosic Lake, '84. *Prof. Porter.*

378. *G. uliginosum*, L. LOW CUDWEED. Frequent.

INULA, L.

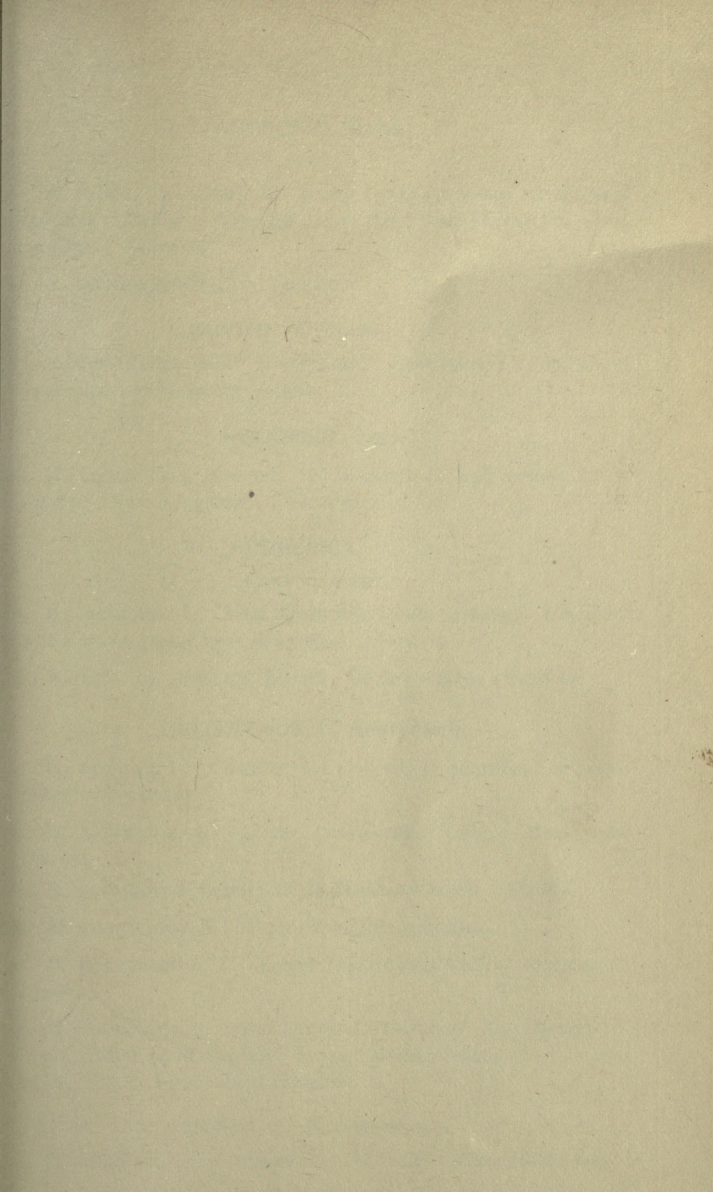
ELECAMPANE.

379. *I. HELENIUM*, L. Below Lackawanna Station, on L. & B. R. R.;
near Dalton. *Dudley.* Near Lehman. *Thurston.*

POLYMNIA, L.

LEAF-CUP.

380. *P. Canadensis*, L. In rocky woods near the road by Campbell's Ledge; apparently scarce in Pennsylvania, Prof. Porter reporting it only from the southeastern part of the State, at two stations. *Dudley.*



AMBROSIA, TOURN.

RAGWEED.

381. *A. trifida*, L. GREAT R. Along the Susquehanna River; near Scranton. *Dudley*. Abundant about the "Pond Holes" and along the river. *Thurston*.
382. *A. artemisiæfolia*, L. Common.

XANTHIUM, TOURN.

383. *X. Canadense*, Mill. COCKLEBUR. Susquehanna river banks; waste places in Wyoming Valley.

HELIOPSIS, PERS.

384. *H. lævis*, Pers. OX-EYE. Near mouth of Lackawanna River. *Dudley*. Near Kingston. *Thurston*.

RUDBECKIA, L.

CONE-FLOWER.

385. *R. laciniata*, L. Near Atherton's Pond. *Dudley*. Abundant in low waste ground near Kingston. *Thurston*.
386. *R. hirta*, L. YELLOW DAISY. CONE-FLOWER. Common.

HELIANTHUS, L. SUNFLOWER.

387. *H. annuus*, L. COMMON S. Cultivated; occasional on waste ground about towns.
388. *H. giganteus*, L. Lower Lackawanna Valley; Mocanaqua. *Dudley*.
389. *H. parviflorus*, Bernh. E. of Penobscot Knob. *Dudley*.
390. *H. divaricatus*, L. Frequent on the mountains.
391. *H. decapetalus*, L. Lower Lackawanna Valley; Mocanaqua. *Dudley*.
392. *H. tuberosus*, L. JERUSALEM ARTICHOKE. By railroad between Pittston and Campbell's Ledge; abundant along the river and by the "Pond Holes" about Kingston.

BIDENS, L. BUR-MARIGOLD.

393. *B. frondosa*, L. COMMON BEGGAR TICKS. Rather Common.

394. *B. connata*, Muhl. Bog above Taylorville, etc. *Dudley*.
 395. *B. cernua*, L. Near the pond opposite Duryea. *Dudley*.
 396. *B. chrysanthemoides*, Michx. Common.

GALINSOGA, RUIZ & PAVON.

397. *G. PARVIFLORA*, Cav. Near Kingston. *Thurston*.

HELENIIUM, L.

SNEEZE-WEED.

398. *H. autumnale*, L. Mouth of Lackawanna River; near Kingston. *Thurston*.

ANTHEMIS, L.

CHAMOMILE.

399. *A. COTULA*, DC. MAYWEED. Common.
A. NOBILIS, L. GARDEN C. Cultivated in old gardens.

ACHILLEA, L.

YARROW.

400. *A. Millefolium*, L. Common.

CHRYSANTHEMUM, TOURN.

401. *C. LEUCANTHEMUM*, L. OX-EYE DAISY. A common weed from Europe.

TANACETUM, L.

402. *T. VULGARE*, L. TANSY. Common.

SENECIO, TOURN.

403. *S. VULGARIS*, L. Jefferson ave., Scranton. *Dudley*.
 404. *S. aureus*, L. Near Kingston. *Thurston*. Var. *obovatus*, Torr. & Gray. Red shales of river mountains. *Dudley*.

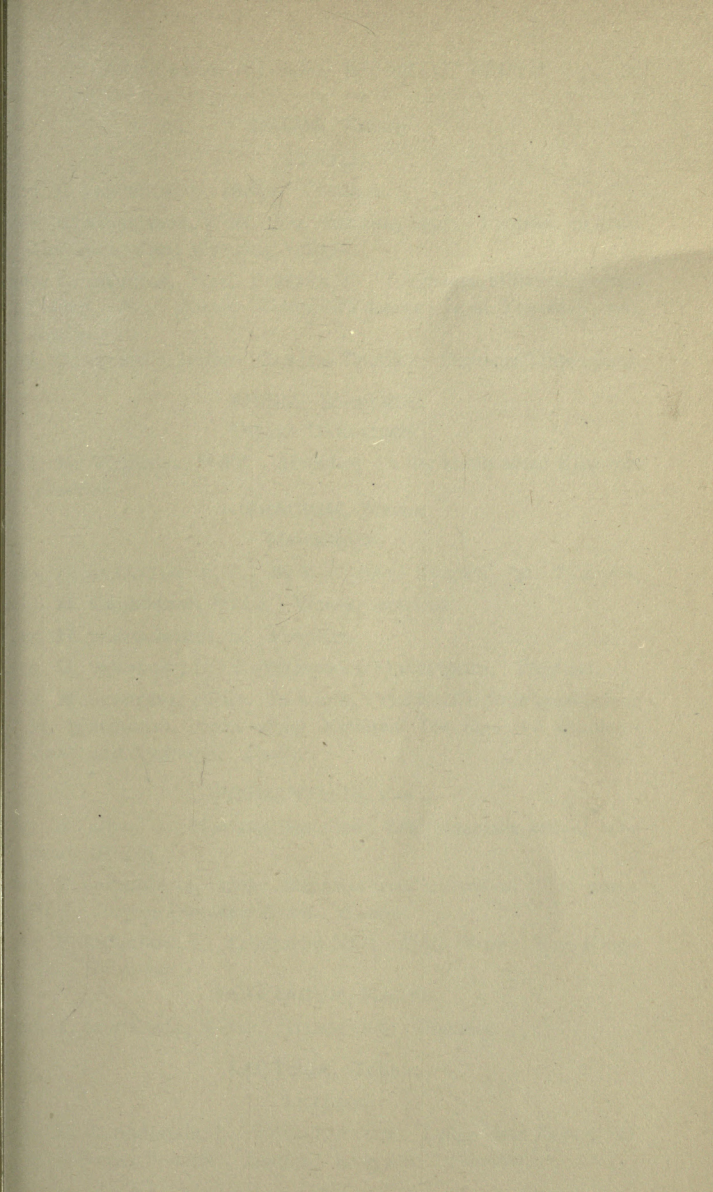
ERECHTITES, RAF.

FIREWEED.

405. *E. hieracifolia*, Raf. Common, especially in clearings on mountains.

ARCTIUM, L.

406. *A. LAPPa*, L. Common.



CNICUS, TOURN.

THISTLE.

407. *C. LANCEOLATUS*, Hoffm. Common.
408. *C. altissimus*, Willd. Var. *discolor*, Gray. Frequent in lower Lackawanna and Wyoming Valleys.
409. *C. pumilus*, Torr. PASTURE T. Tobyhanna Mills and Pocono Station. *Prof. Porter*. Campbell's Ledge; Scott Township road. *Dudley*.
410. *C. ARVENSIS*, Hoffm. CANADA THISTLE. Occasional throughout.

KRIGIA, SCHREBER.

DWARF DANDELION.

411. *K. Virginica*, Willd. Abundant on dry knolls about Kingston. *Thurston*.

HIERACIUM, TOURN.

HAWKWEED.

412. *H. AURANTIACUM*, L. By R. R. above Kingston, '91. *Thurston*.
413. *H. Canadense*, Michx. Woods, occasional.
414. *H. paniculatum*, L. Frequent.
415. *H. venosum*, L. RATTLESNAKE HAWKWEED. Frequent.
416. *H. scabrum*, Michx. In woods. The slender form approaching *H. Marianum*, occurs along Mountain Inn road; on Penobscot Knob, and elsewhere. *Dudley*.

PRENANTHES, VAILL.

417. *P. alba*, L. Mountain Inn road; Bald Mountain woods; common. *Dudley*.
418. *P. serpentaria*, Pursh. Mountain woods; frequent. Var. *nana*, Gray. Top of Penobscot Knob. *Dudley*.
419. *P. altissima*, L. Tobyhanna Mills. *Prof. Porter*. Near Kingston. *Thurston*.

TARAXACUM, HALLER.

420. *T. OFFICINALE*, Weber. DANDELION. Common.

LACTUCA, TOURN.

LETTUCE.

421. *L. Canadensis*, L. WILD LETTUCE. Ledge near Keyser Valley; Pocono Summit. *Dudley*. Kingston. *Thurston*.

422. *L. integrifolia*, Bigel. (*L. Canadensis*, var. *integrifolia*, 5th ed., Man.) Near Kingston, in herb. *Thurston*.
423. *L. acuminata*, Gray. Near Kingston. *Thurston*.
424. *L. leucophæa*, Gray. Abundant in the lower Lackawanna Valley. *Dudley*. Not rare about Kingston. *Thurston*.

SONCHUS, L.

SOW-THISTLE.

425. *S. OLERACEUS*, L. Ledge near Keyser Valley; Scranton streets. *Dudley*.
426. *S. ASPER*, Vill. Near Kingston. *Thurston*.

48. LOBELIACEÆ.

LOBELIA, L.

427. *L. cardinalis*, L. CARDINAL-FLOWER. Roaring Brook. *Mrs. Buell*. Wyoming; above Luzerne. *Thurston*. Outlet of Lehigh Pond. *Dudley*. Newton Lake; Dundaff; South Canaan, Wayne Co. *Graves*.
428. *L. syphilitica*, L. GREAT BLUE L. On red shales along Mountain Inn road. *Dudley*. Near Kingston. *Mrs. J. H. Race*.
429. *L. spicata*, Lam. Common.
430. *L. inflata*, L. INDIAN TOBACCO. Common.

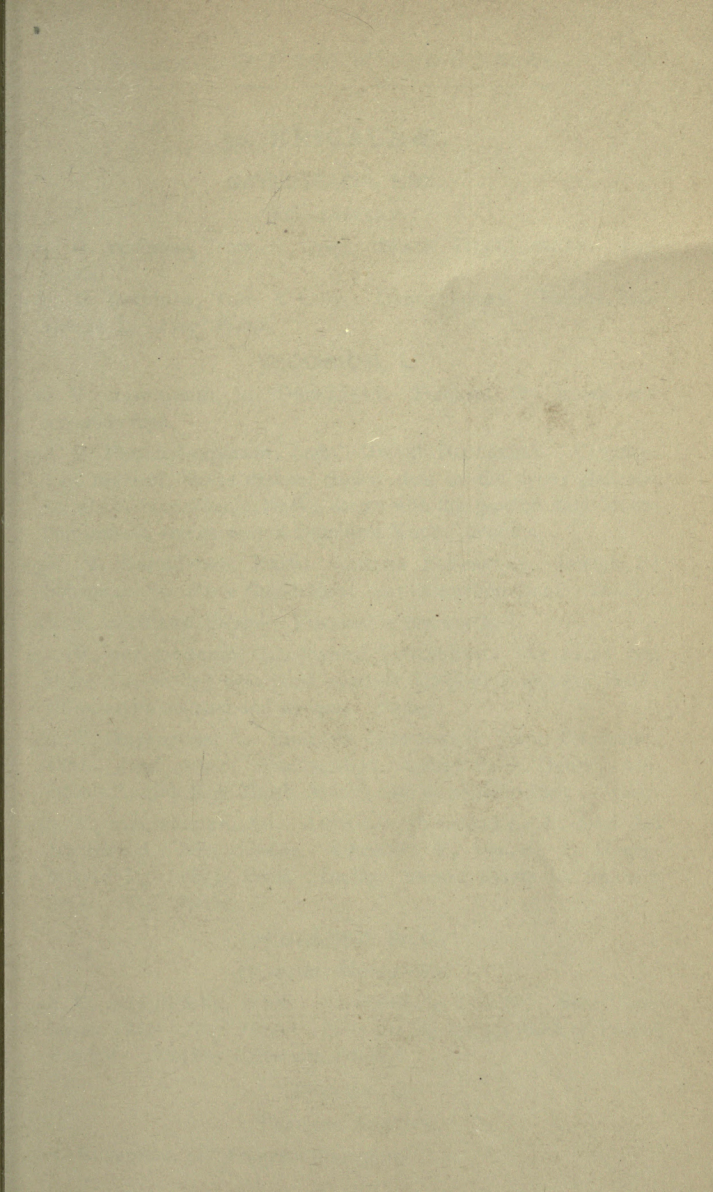
49. CAMPANULACEÆ.

SPECULARIA, HEISTER.

431. *S. perfoliata*, A. DC. Common in fields.

CAMPANULA, TOURN.

432. *C. rotundifolia*, L. HAREBELL. Campbell's Ledge; Penobscot Knob. *Dudley*.
433. *C. aparinoides*, Pursh. MARSH BELLFLOWER. Marsh above Gouldsboro. *Dudley*. Above Mocanaqua. *Graves*. Near Lehman. *Thurston*.
434. *C. Americana*, L. TALL BELLFLOWER. By Woodward Breaker, near Kingston. *Thurston*.



50. ERICACEÆ.

GAYLUSSACIA, HBK.

HUCKLEBERRY.

435. *G. resinosa*, Torr. & Gray. BLACK HUCKLEBERRY. Dry woods.
436. *G. frondosa*, Torr. & Gray. DANGLEBERRY. Pocono Sta.; Moosic L. *Prof. Porter.*

VACCINIUM, L.

437. *V. stamineum*, L. DEERBERRY. Frequent, dry woods and mountain tops.
438. *V. Pennsylvanicum*, Lam. DWARF BLUEBERRY. Common. Var. *nigrum*, leaves darker; thicker than in the type; glaucous, serrulate; berries large, black; occurs with the type on Bald Mountain summit, and summit of Penobscot Knob. *Dudley.*
439. *V. Canadense*, Kalm. CANADA BLUEBERRY. Lehigh P.; Sphagnum Sw. above Gouldsboro; near its southern limit. *Dudley.*
440. *V. vacillans*, Soland. Frequent in dry woods.
441. *V. corymbosum*, L. SWAMP BLUEBERRY. The round bog above Taylorville; near pond opposite Duryea; Atherton's Pond; all mountain marshes and streams. *Dudley.*
442. *V. Oxycoccus*, L. SMALLER CRANBERRY. Near Tobyhanna, 1881. *Prof. Porter.* *Dudley*, 1890. Lehigh P.; L. Henry; Atherton's P.; Sink Hole Marsh, Ararat; near its southern limit. *Dudley.*
443. *V. macrocarpon*, Ait. AMERICAN CRANBERRY. L. Ariel and Maplewood. *Miss Carlson.* Atherton's P., Dalton; L. Henry; Moosic L.; Lehigh Pond. *Dudley.* Centre county its southern limit. *Prof. Porter.*

CHIOGENES, SALSB.

CREEPING SNOWBERRY.

444. *C. serpyllifolia*, Salisb. (*C. hispidula*, T. & G.) Near Tobyhanna, 1881. *Prof. Porter.* Near the big springs south of Pocono Summit. *Douglass Green and Dudley.*

EPIGÆA, L.

TRAILING ARBUTUS.

445. *E. repens*, L. Frequent throughout.

GAULTHERIA, KALM.

WINTERGREEN. TEABERRY.

446. *G. procumbens*, L. Common.

ANDROMEDA, L.

447. *A. polifolia*, L. Ararat marsh; Lehigh Pond. *Dudley*. Near its southern limit. *Prof. Porter*.
 448. *A. ligustrina*, Muhl. Damp places, mountain woods and pastures; a characteristic shrub of the region; L. Henry; Lehigh Pond. *Dudley*.

CASSANDRA, DON.

LEATHER-LEAF.

449. *C. calyculata*, Don. Marsh north of Taylorville; Atherton's Pond, Dalton; Ararat Marsh; source of Little Roaring Brook; Lehigh Pond; Marsh above Gouldsboro; L. Henry; Moosic L. *Dudley*. Near Kingston. *Thurston*.

KALMIA, L.

AMERICAN LAUREL.

450. *K. latifolia*, L. MOUNTAIN LAUREL. Frequent.
 451. *K. angustifolia*, L. SHEEP LAUREL. An abundant and characteristic plant of Lackawanna Valley.
 452. *K. glauca*, Ait. PALE LAUREL. Ararat Sinkhole Marsh; L. Henry; Lehigh Pond. *Dudley*. Near its southern limit. *Prof. Porter*.

RHODODENDRON, L.

453. *R. viscosum*, Torr. (*Azalea viscosa*, L.) CLAMMY WHITE AZALEA. Exeter Swamp, Pittston. *Miss Carlson*. On the Tobyhanna. *Prof. Porter*. Pocono Summit. *Dudley*. Lehigh Pond. *Maggie Schimpf*. All the forms noticed belong to var. *glaucum*, Gray.
 454. *R. nudiflorum*, Torr. (*A. nudiflora*, L.) PINK AZALEA. Common.
 455. *R. canescens* (Michx), Porter. (*Azalea canescens*, Michx. Flora, I., p. 150, 1803.) In the Bulletin Torr. Botan. Club, XVI. (1889), p. 220, Prof. Porter restores this old species, merged by Gray under *R. nudiflorum*. He includes here a form having flowers a bright rose-color with a short corolla tube, and leaves paler and tomentose-pubescent. It was found by Prof. Porter on the Pocono; by myself on Bald Mt., and occurs southwardly along the mountains. *Dudley*.

456. *R. Rhodora*, Don. (*Rhodora canadensis*, L.) RHODORA. Abundant on the Pocono; near its southern limit. *Prof. Porter*. Mountains N. E. of Dunmore; Moosic L.; Reservoir L. east of Glen Summit, etc. *Dudley*.

457. *R. maximum*, L. BIG LAUREL. Along all the streams descending from the mountains; on the Lackawanna R.; in the evergreen forests on the Pocono—a splendid plant.

[*Menziesia globularis* Salisb., a southern plant, is found sparingly in N. E. Penn. according to Prof. Porter. Not seen within limits.]

LEDUM, L.

LABRADOR TEA.

458. *L. latifolium*, Ait. Lehigh Pond Marsh, 1886; above Gouldsboro near railroad, 1886. *Dudley*. On the Tunkhanna; at Naomi Pines. *Porter*. Near its southern limit. The above stations the only ones reported from Pennsylvania. *Porter*.

CHIMAPHILA, PURSH.

PRINCE'S PINE.

459. *C. umbellata*, Nutt. Not rare.

460. *C. maculata*, Pursh. SPOTTED PRINCE'S PINE. Luzerne, etc., not rare. *Thurston*.

MONESES, SALISB.

M. grandiflora, Salisb. (*M. uniflora*, Gray.) Collected in Susquehanna Co. by the elder Canby, the specimen being in Prof. Porter's herbarium. Not collected since.

PYROLA, TOURN.

FALSE WINTERGREEN.

461. *P. secunda*, L. Wilkes-Barre Mt., in herb. *Thurston*.

462. *P. elliptica*, Nutt. SHIN-LEAF. Frequent.

463. *P. rotundifolia*, L. Near Duryea; Campbell's Ledge woods; Mountain Inn road, and elsewhere. *Dudley*.

MONOTROPA, L.

464. *M. uniflora*, L. INDIAN PIPE. Apparently widely distributed, and rather common in both valleys.

465. *M. Hypopitys*, L. PINE-SAP. Kingston. *Thurston*. Near Lynn, Susquehanna Co., apparently rare. *Davis*.

51. PRIMULACEÆ.

TRIENTALIS, L.

466. *T. Americana*, Pursh. STAR-FLOWER. Head of Little Roaring Brook; Scott township road. *Dudley*. Near Green Ridge. *Mrs. Beeber*. Harvey's Lake. *Thurston*. Common about Archbald. *Davis*.

STEIRONEMA, RAF.

467. *S. ciliatum*, Raf. Near mouth of Lackawanna River. *Dudley*. Near Kingston, in herb. *Thurston*.

LYSIMACHIA, TOURN.

468. *L. quadrifolia*, L. Common in thickets and mountain woods.
 469. *L. stricta*, Ait. Common on margins of standing water.
 470. *L. thyrsiflora*, L. Wyoming Swamp; Lake Henry, on the islands. *Dudley*. Lake Ariel and Maplewood. *Miss Carlson*.

52. OLEACEÆ.

FRAXINUS, TOURN.

ASH.

471. *F. Americana*, L. WHITE ASH. Frequent in lower Lackawanna Valley; Keyser Valley. *Dudley*. Occasional. *Davis*.
 472. *F. pubescens*, Lam. RED ASH. Near Kingston, by "Pond Holes." *Dudley*.
 473. *F. sambucifolia*, Lam. BLACK ASH. By the river below Scranton. *Dudley*. Occasional. *Davis*.

53. APOCYNACEÆ.

APOCYNUM, TOURN.

474. *A. androsæmifolium*, L. Common.
 475. *A. cannabinum*, L. INDIAN HEMP. Rather common in lower Lackawanna and Wyoming Valleys.

54. ASCLEPIADACEÆ.

ASCLEPIAS, L.

MILKWEED.

476. *A. tuberosa*, L. Near Coxtan.
477. *A. incarnata*, L. SWAMP M. Common.
478. *A. Cornuti*, Decaisne. COMMON M. Common.
479. *A. obtusifolia*, Michx. Sandy ground W. of Campbell's Ledge. *Dudley*.
480. *A. phytolaccoides*, Pursh. Common about Archbald. *Davis*.
Not rare about Kingston. *Thurston*.
481. *A. quadrifolia*, L. Below Campbell's Ledge. *Dudley*. Opp. Pittston Park. *Miss Carlson*. Rather common in dry woods about Kingston. *Thurston*.
482. *A. verticillata*, L. Campbell's Ledge. *Dudley*.

55. GENTIANACEÆ.

GENTIANA, TOURN.

483. *G. crinita*, Froel. FRINGED GENTIAN. In Scott, on the mountains five miles from Scranton. *Mrs. Buell* and *Mrs. Beeber*. Campbell's Ledge. *Miss M. Jackson*. Plymouth; hills back of Kingston; Wilkes-Barre Mt. *Thurston*. E. and N. of Fairview; red shales of the Mountain Inn road, in herb. *Dudley*.
484. *G. quinqueflora*, Lam. Rare in fields back of Plainsville. *Davis*. Frequent at Fairview and northward. *Dudley*. Frequent on Wilkes-Barre Mountain. *Thurston*.
485. *G. Saponaria*, L. Red shales on Mountain Inn road, in herb. *Dudley*.
486. *G. Andrewsii*, Griseb. CLOSED GENTIAN. Scott township about five miles from Scranton. *Mrs. Buell*. Near Kingston. *Mrs. J. H. Race*.
487. *G. linearis*, Froel. (*G. saponaria*, var. *linearis*, Gray.) Pocono station and Tobyhanna, '81. *Prof. Porter*. By tram road from Gouldsboro to Lehigh Pond. *Dudley*.

BARTONIA, MUHL.

488. *B. tenella*, Muhl. Moosic Lake. *Prof. Porter*. East of Penobscot Knob, occasional. *Dudley*.

MENYANTHES, TOURN.

BUCKBEAN.

489. *M. trifoliata*. L. Lake Ariel. *Miss Carlson* and *Miss Emily Johnson*. Lake Henry; Moosic Lake; Atherton's Pond; Lehigh Pond, in herb. *Dudley*.

56. POLEMONIACEÆ.

PHLOX, L.

490. *P. subulata*, L. MOSS PINK. Rather common on the cliffs of the mountain sides.

POLEMONIUM, TOURN.

491. *P. reptans*, L. One plant by Toby's Creek, near Kingston; a small bed by river opp. Forty Fort. *Thurston*.

57. HYDROPHYLLACEÆ.

HYDROPHYLLUM, TOURN.

492. *H. Virginicum*, L. Elk Mt., north knob. *Dudley*. Abundant near Kingston, by the river. *Thurston*.

58. BORRAGINACEÆ.

CYNOGLOSSUM, TOURN.

HOUND'S-TONGUE.

493. *C. OFFICINALE*, L. About Scranton. *Dudley*. Campbell's Ledge. *Thurston*.

494. *E. Virginicum*, L. Elk Mt., in herb. *Graves*.

ECHINOSPERMUM, LEHM.

495. *E. Virginicum*, Lehm. BEGGAR'S LICE. About Kingston. *Thurston*. Lower Lackawanna Valley; Duryea; Shickshinny. *Dudley*.

496. *E. LAPPULA*, Lehm. STICKSEED. Ledges near Keyser Valley. *Dudley*.

MERTENSIA, ROTH.

LUNGWORT.

497. *M. Virginica*, DC. Carpenter's Island, near Pittston. *Miss Carlson*. By the river opposite Plymouth, abundant. *Miss Kate Walton*. Along the river, near Kingston. *Thurston*.

MYOSOTIS, DILL.

FORGET-ME-NOT.

498. *M. laxa*, Lehm. (*M. palustris*, var. *laxa*, Gray.) The Forget-me-not of America. Kingston "Pond Holes." *Thurston*. Near Scranton. *Mrs. Buell*. Scott township road. *Dudley*.

LITHOSPERMUM, TOURN.

499. *L. ARVENSE*, L. About Kingston. *Thurston*. In herb. *Davis*. Slocum's ave., W. Pittston. *Miss Carlson*.

59. CONVULVULACEÆ.

IPOMŒA, L.

MORNING GLORY.

I. COCCINEA, L. SCARLET MORNING GLORY.

I. PURPUREA, Lam. COMMON MORNING GLORY.

The two preceding cultivated species.

CONVOLVULUS, TOURN.

BINDWEED.

500. *C. sepium*, L. Rather common in lower Lackawanna and Wyoming Valleys.

CUSCUTA, TOURN.

DODDER.

501. *C. chlorocarpa*, Engelm. By the pond opp. Duryea; on solidago and a shrub, Kingston Flats; and by the river opp. the Pettebone Breaker. *Dudley*.
502. *C. Gronovii*, Willd. Near Laflin on D. & H. R. R.; in herb. *Davis*. Pocono Summit. *Dudley*. Common in low ground near Kingston, Wyoming, etc. *Thurston*.

60. SOLANACEÆ.

SOLANUM, TOURN.

503. *S. DULCAMARA*, L. Common. *Davis*. Not common about Kingston. *Thurston*.

504. *S. nigrum*, L. COMMON NIGHTSHADE. Frequent about streets and waste ground of Kingston. *Thurston*.

PHYSALIS, L.

GROUND CHERRY.

505. *P. Virginiana*, Mill. (*P. viscosa*, 5th ed. Man.) Campbell's Ledge; Mocanaqua. *Dudley*.

LYCIUM, L.

MATRIMONY-VINE.

506. *L. VULGARE*, Dunal. Beside the road to Plymouth below Kingston.

DATURA, L.

JAMESTOWN-WEED.

507. *D. STRAMONIUM*, L. Not uncommon in waste ground.

508. *D. TATULA*, L. Waste ground near Kingston. *Thurston*.

61. SCROPHULARIACEÆ.

VERBASCUM, L.

MULLEIN.

509. *V. THAPSUS*, L. COMMON MULLEIN.

510. *V. BLATTARIA*, L. MOTH M. One plant by Wyoming Station, D., L. & W. R. R.; in a field on Pringle Hill, near Kingston, abundant. *Thurston*.

LINARIA, TOURN.

TOAD-FLAX.

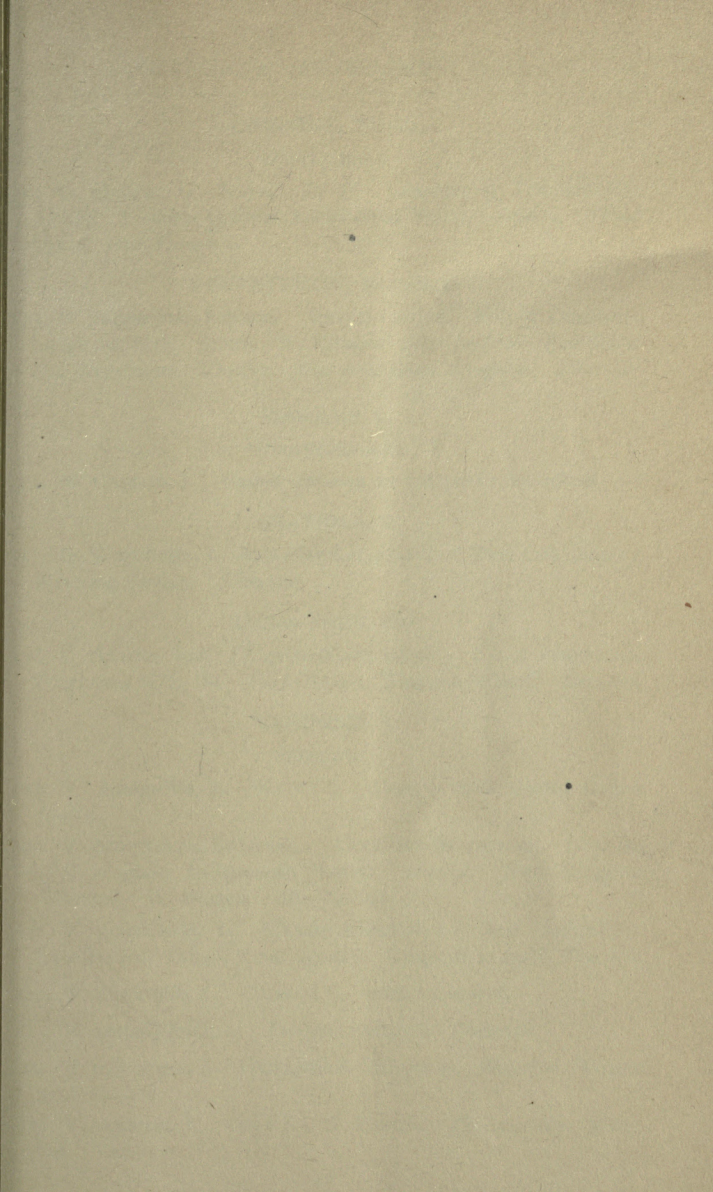
511. *L. Canadensis*, Dumont. Common around Archbald. *Davis*.

512. *L. VULGARIS*, Mill. BUTTER AND EGGS. Common.

SCROPHULARIA, TOURN.

FIGWORT.

513. *S. nodosa*, L. Var. *Marilandica*, Gray. Frequent.



CHELONE, TOURN.

TURTLE-HEAD.

514. *C. glabra*, L. Scarce. *Davis*. Common at Tompkinsville. *Graves*. Frequent in lower Lackawanna Valley. *Dudley*. "Pond Holes," near Kingston.

PENTSTEMON, MITCHELL.

515. *P. pubescens*, Solander. BEARD-TONGUE. Foot of Campbell's Ledge; in herb. *Davis*. W. Pittston. *Miss Carlson*. Red Shales near Mocanaqua. *Dudley*. Abundant about Kingston. *Thurston*.

MIMULUS, L.

MONKEY-FLOWER.

516. *M. ringens*, L. Rather common in wet places throughout.

GRATIOLA, L.

517. *G. Virginiana*, L. Above breaker and falls at West End. *Dudley*. Wyoming Swamp. *Thurston*.

ILYSANTHES, RAF.

518. *I. riparia*, Raf. (*I. gratioloides*, Benth.) FALSE PIMPERNEL. Tobyhanna Mills, '81. *Prof. Porter*. Kingston "Flats." *Thurston*.

VERONICA, L.

SPEEDWELL.

519. *V. Anagallis*, L. WATER S. Along a brook toward Dalton. *Dudley*.
520. *V. Americana*, Schweinitz. AMERICAN BROOKLIME. Near the pond in lower Lackawanna Valley. *Dudley*. Near Kingston. *Thurston*. W. Pittston. *Miss Carlson*.
521. *V. scutellata*, L. MARSH SPEEDWELL. Near Gouldsboro; Lake Henry; Lehigh Pond. *Dudley*. Kingston, in herb. *Thurston*.
522. *V. officinalis*, L. COMMON S. Rather frequent.
523. *V. serpyllifolia*, L. THYME-LEAVED S. Common.
524. *V. peregrina*, L. PURSLANE S. Kingston. *Thurston*. Coxtan. *Miss Carlson*.
525. *V. arvensis*, L. CORN S. W. Pittston. *Miss Carlson*. Kingston. *Thurston*.

GERARDIA, L.

526. *G. pedicularia*, L. Campbell's Ledge; bank west of lower Lackawanna Valley. *Dudley*.
527. *G. flava*, L. DOWNY FALSE FOXGLOVE. Woods of Campbell's Ledge, in herb. *Davis*. Near Kingston. *Thurston*.
528. *G. quercifolia*, Pursh. SMOOTH FALSE FOXGLOVE. On Campbell's Ledge. *Dudley*.
529. *G. tenuifolia*, Vahl. SLENDER GERARDIA. Campbell's Ledge; N. of Fairview; Penobscot Knob; red shales of the river mountains. *Dudley*. Dry ground and cliffs below Kingston. *Thurston*.

PEDICULARIS, TOURN.

LOUSEWORT.

530. *P. Canadensis*, L. COMMON L. Abundant in lower Lackawanna and Wyoming Valleys; probably so elsewhere.
531. *P. lanceolata*, Michx. Slocum's Summit, near Pittston. *Miss Carlson*.

MELAMPYRUM, TOURN.

COW-WHEAT.

532. *M. Americanum*, Michx. Common. Campbell's Ledge; Mountain Inn road; on river mountains, etc.

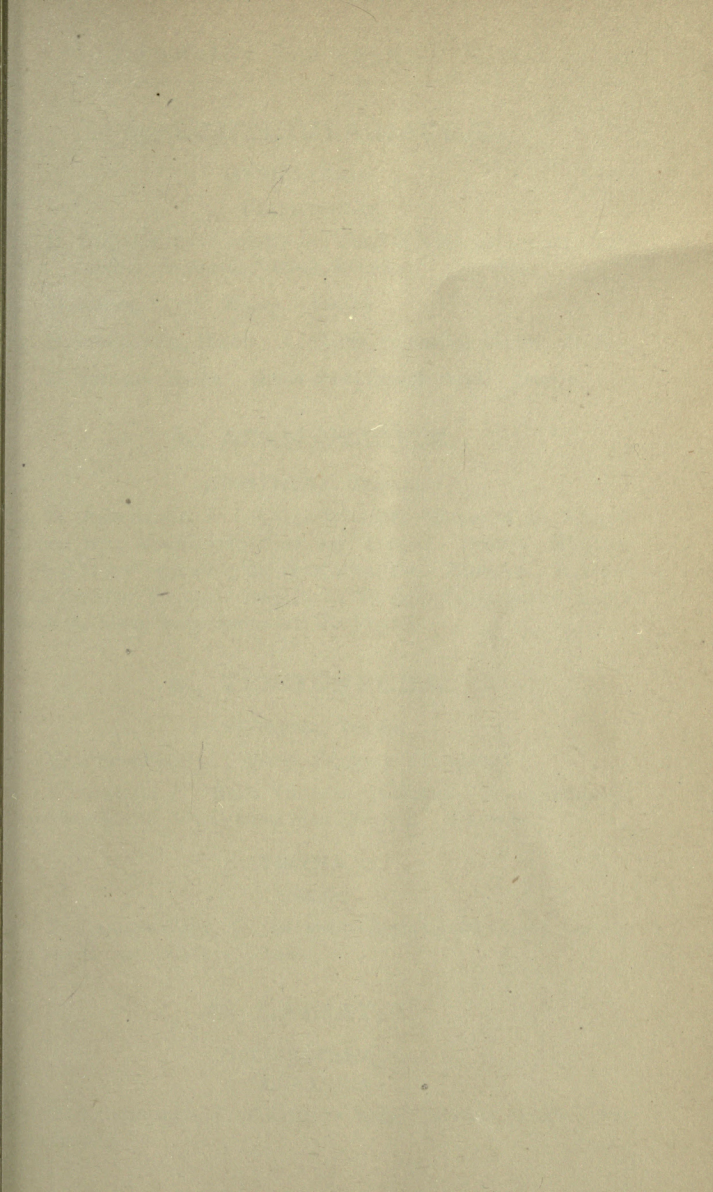
62. OROBANCHACEÆ.

EPIPHEGUS, NUTT.

533. *E. Virginiana*, Bart. BEECH-DROPS. Rather common, in herb. *Davis*. Scott Township road. *Dudley*. Near Harvey's Lake. *Thurston*.

APHYLLON, MITCHELL.

534. *A. uniflorum*, Gray. D., L. & W. R. R. track, Winton to Greenville. *Graves*. Not rare in Wyoming Valley, but often overlooked. *Thurston*. Opp. Pittston Park. *Miss Carlson*.



63. LENTIBULARIACEÆ.

UTRICULARIA, L.

BLADDERWORT.

535. *U. vulgaris*, L. COMMON B. Pond in lower Lackawanna Valley. *Dudley*. Wyoming Swamp, abundant. *Thurston*.
 536. *U. minor*, L. L. Henry. *Dudley*.
 537. *U. intermedia*, Hayne. L. Henry, on floating islands. *Dudley*.
 538. *U. cornuta*, Michx. Marsh about Lehigh Pond. *Dudley*.

64. ACANTHACEÆ.

DIANTHERA. GRONOV.

539. *D. Americana*, L. WATER-WILLOW. Shores of the Susquehanna near Mocanaqua; Pond opp. Duryea. *Dudley*. Kingston "Pond Holes" and along the river, abundant. *Thurston*. Before it was found on the upper Susq. R., in '86, Prof. Porter quoted it only from the lower Susquehanna and the Juniata.

65. VERBENACEÆ.

VERBENA, TOURN.

540. *V. urticæfolia*, L. WHITE VERVAIN. Frequent
 541. *V. hastata*, L. BLUE VERVAIN. Common. An apparent hybrid between the two is found near Kingston. *Thurston*.

PHRYMA, L.

LOPSEED.

542. *P. Leptostachya*, L. Between Glenburn and Clark's Summit, in woods near turnpike. *Davis*.

66. LABIATÆ.

TRICHOSTEMA, L.

BLUE CURLS.

543. *T. dichotomum*, L. Campbell's Ledge; Duryea. *Dudley*. Not uncommon.

TEUCRIUM, TOURN.

544. *T. Canadense*, L. GERMANDER. Near Kingston. *Thurston*.
In herb. of Mr. Davis, probably from near the Susquehanna. *Dudley*.

COLLINSONIA, L.

545. *C. Canadensis*, L. HORSE-BALM. Lower Lackawanna Valley;
Bald Mt., abundant; toward L. Henry. *Dudley*. Rather common.

MENTHA, TOURN.

MINT.

546. *M. VIRIDIS*, L. SPEARMINT. Common.
547. *M. PIPERITA*, L. PEPPERMINT. Common.
548. *M. Canadensis*, L. WILD MINT. Along the Susquehanna.
Dudley. About Kingston.

LYCOPUS, TOURN.

WATER HOREHOUND.

549. *L. Virginicus*, L. BUGLE-WEED. In herb. *Davis*. About
Kingston, probably common.
550. *L. sinuatus*, Ell. (*L. Europæus*, var. *sinuatus*, 5th ed. Man.)
Lower Lackawanna Valley. *Dudley*. Kingston, etc.

CUNILA, L.

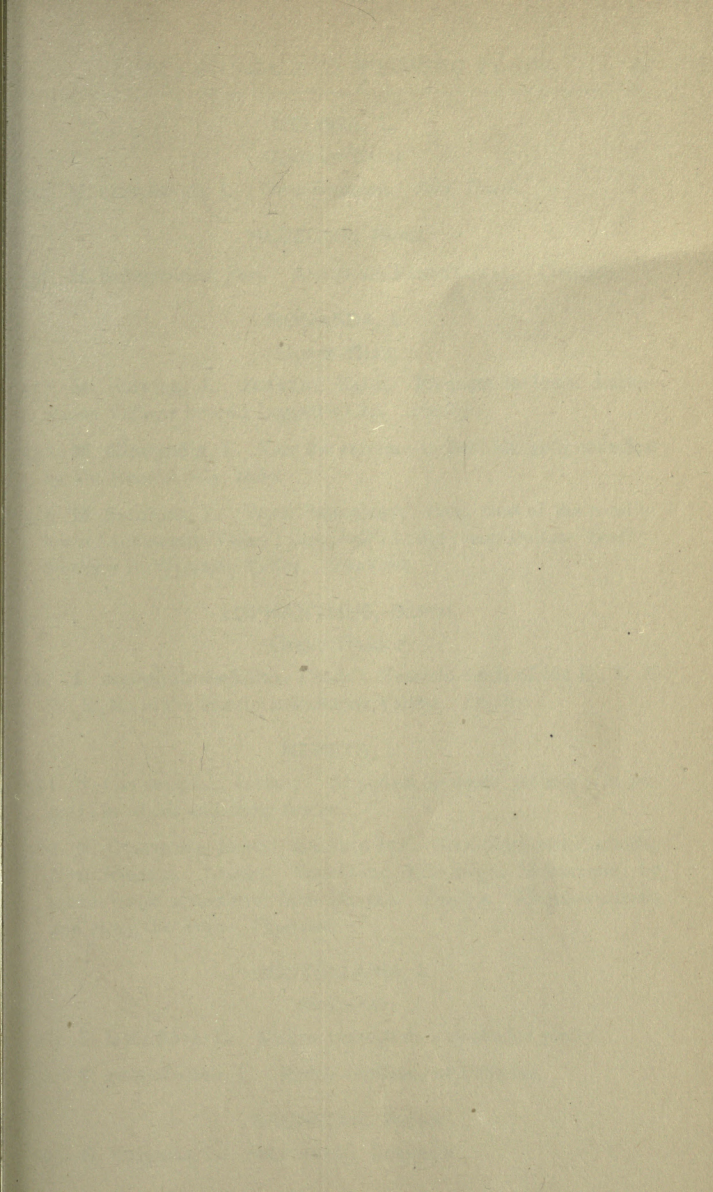
551. *C. Mariana*, L. DITTANY. Top of Campbell's Ledge, in herb.;
red shales of the river mountains. Dr. Gray, in the *Synoptical Flora*
of *North America*, says it occurs "from southern New York and
Ohio to Georgia." This station is not far from its northern limit,
although I have collected it near New York City. *Dudley*.

PYCNANTHEMUM, MICHX.

552. *P. lanceolatum*, Pursh. On Woodward Hill, near Kingston,
abundant. *Thurston*.
553. *P. incanum*, Michx. MOUNTAIN MINT. Frequent on banks
near the lower Lackawanna Valley. *Dudley*.

CALAMINTHA, TOURN.

554. *C. Clinopodium*, Benth. BASIL. Common.



MELISSA, L.

COMMON BALM.

555. *M. officinalis*, L. Near Scranton. *Mrs. Buell.*

HEDEOMA, PERS.

556. *H. pulegioides*, Pers. AMERICAN PENNYROYAL. Common.

MONARDA, L.

HORSE-MINT.

557. *M. didyma*, L. SCARLET BALM. Frequent in lower Lackawanna Valley; beyond Leggett's Gap. *Dudley.*

558. *M. clinopodia*, L. Near the entrance to Bald Mt. path, collected by Mr. Reeves, July, 1889.

559. *M. fistulosa*, L. WILD BERGAMOT. Bank west of the pond in lower Lackawanna Valley; Campbell's Ledge; near Dalton. *Dudley.* Not rare in Wyoming Valley. *Thurston.*

LOPHANTHUS, BENTH.

GIANT HYSSOP.

560. *L. scrophulariæfolius*, Benth. Near old track of the D., L. & W. R. R., in the lower Lackawanna Valley. *Dudley.*

NEPETA, L.

561. *N. cataria*, L. CATNIP. Abundant in waste ground, also frequent in woods and along fences.

562. *N. glechoma*, Benth. GROUND IVY. GILL-OVER-THE-GROUND. Near Scranton. *Graves.* Foot of red shale ledges, Mocanaqua; by school house across river from Duryea. *Dudley.* Kingston streets, and along the river. *Thurston.*

SCUTELLARIA, L.

SKULLCAP.

563. *S. lateriflora*, L. Rather common in wet, shaded places.

564. *S. galericulata*, L. Rather common, with the last.

BRUNELLA, TOURN.

565. *B. vulgaris*, L. SELF-HEAL. Common.

PHYSOSTEGIA, BENTH.

566. *P. Virginiana*, Benth. FALSE DRAGON-HEAD. Gravelly shores of the Susquehanna S. E. of Mocanaqua, in herb.; on its northeastern limit. Prof. Porter reports it from Pennsylvania only from the Schuylkill below Norristown, and from southeastern Pennsylvania (its eastern limit), and from Presque Isle on Lake Erie. *Dudley*.

LEONURUS, L.

567. *L. CARDIACA*, L. MOTHERWORT. Lower Lackawanna Valley. *Dudley*. Slocum's Avenue, Pittston. *Miss Carlson*. Occasional in Wyoming Valley. *Thurston*.

LAMIUM, L.

568. *L. AMPLEXICAULE*, L. On a bank by R. R. below Kingston, also occasional in cultivated fields. *Thurston*.

STACHYS, TOURN.

569. *S. aspera*, Michx. (*S. palustris*, var. *aspera*, Gray.) Near Pittston. *Dudley*. Near R. R. station, Kingston.

67. PLANTAGINACEÆ.

PLANTAGO, TOURN.

570. *P. major*, L. COMMON PLANTAIN. Near Wilkes-Barre, etc. *Dudley*. Probably common.
571. *P. Rugelii*, Decaisne. Lower Lackawanna Valley. *Dudley*. Common. *Davis*. The two last much alike in general appearance, and both are probably common. For distinction between them see Man., p. 423.
572. *P. LANCEOLATA*, L. ENGLISH PLANTAIN. RIBWORT PLANTAIN. Common.

68. ILLECEBRACEÆ.

ANYCHIA, MICHX.

573. *A. dichotoma*, MICHX. River mountains (?). *Dudley*.

SCLERANTHUS, L.

KNAWEL.

574. *S. ANNUUS*, L. Frequent in barren fields near Wilkes-Barre. *Dudley*. Pringle Hill, near Kingston. *Thurston*.

69. AMARANTACEÆ.

AMARANTUS, TOURN.

575. *A. RETROFLEXUS*, L. Abundant below Scranton. *Dudley*. Kingston, and elsewhere.
576. *A. albus*, L. Common. A prostrate *Amarantus* with large seeds, short bracts, and resembling *A. blitoides*, WATSON (see *Proc. of Amer. Acad.*, XII., p. 273, and *Cayuga Flora*, p. 75), but having the utricle of *A. albus*, was found on the D., L. & W. R. R. near Bennett's Station; in herb. *Dudley*.

70. CHENOPODIACEÆ.

CHENOPODIUM, TOURN.

PIGWEED.

577. *C. ALBUM*, L. Common.
578. *C. hybridum*, L. MAPLE-LEAVED GOOSEFOOT. Ledges above Taylorville; near falls of Black River. *Dudley*.
579. *C. BOTRYS*, L. JERUSALEM OAK. Wilkes-Barre; Shickshinny; Scranton, etc. *Dudley*.
580. *C. AMBROSIOIDES*, L. MEXICAN TEA. Abundant in streets of Wilkes-Barre. *Dudley*. Kingston, etc. *Thurston*.

ATRIPLEX, TOURN.

581. *A. patulum*, L., var. *hastatum*, GRAY. Streets of Wilkes-Barre (?). *Dudley*. Var. *littorale*, GRAY. Scranton streets. *Dudley*.

71. PHYTOLACCACEÆ.

PHYTOLACCA, TOURN.

POKEWEED.

582. *P. decandra*, L. Frequent.

72. POLYGONACEÆ.

RUMEX, L.

DOCK. SORREL.

583. *R. verticillatus*, L. SWAMP DOCK. Kingston "Pond Holes," abundant. *Thurston*.
584. *R. CRISPUS*, L. YELLOW DOCK.

585. *R. obtusifolius*, L. BITTER DOCK.

586. *R. acetosella*, L. SHEEP-SORREL. This, and the two preceding, common European weeds.

POLYGONUM, TOURN.

KNOTWEED.

587. *P. aviculare*, L. Common in "door yards" and by well trodden paths.

588. *P. erectum*, L. (*P. aviculare*, var. *erectum*, 5th ed. Man.) Common.

589. *P. tenue*, MICHX. Top of Campbell's Ledge, in herb.; Penobscot Knob. *Dudley*.

590. *P. lapathifolium*, L. Var. *incarnatum*, WATSON. (*P. incarnatum*, ELL.) In Mr. Davis' herb., probably from within limits.

591. *P. pennsylvanicum*, L. Near Kingston, etc.

592. *P. amphibium*, L. Shores of the Susquehanna S. E. of Moca-naqua. *Dudley*.

593. *P. Careyi*, OLNEY. Pocono Station, D., L. & W. R. R. *Prof. Porter*. Near the pond in lower Lackawanna Valley, a doubtful specimen. *Dudley*.

594. *P. orientale*, L. PRINCE'S FEATHER. Pittston, near D., L. & W. R. R. *Miss Carlson*. Occasional in waste ground near Kingston. *Thurston*.

595. *P. persicaria*, L. Frequent.

596. *P. hydropiperoides*, MICHX. WATER-PEPPER. Shores of Susq. below Mocanaqua, in herb. *Dudley*.

597. *P. hydropiper*, L. SMARTWEED. Common.

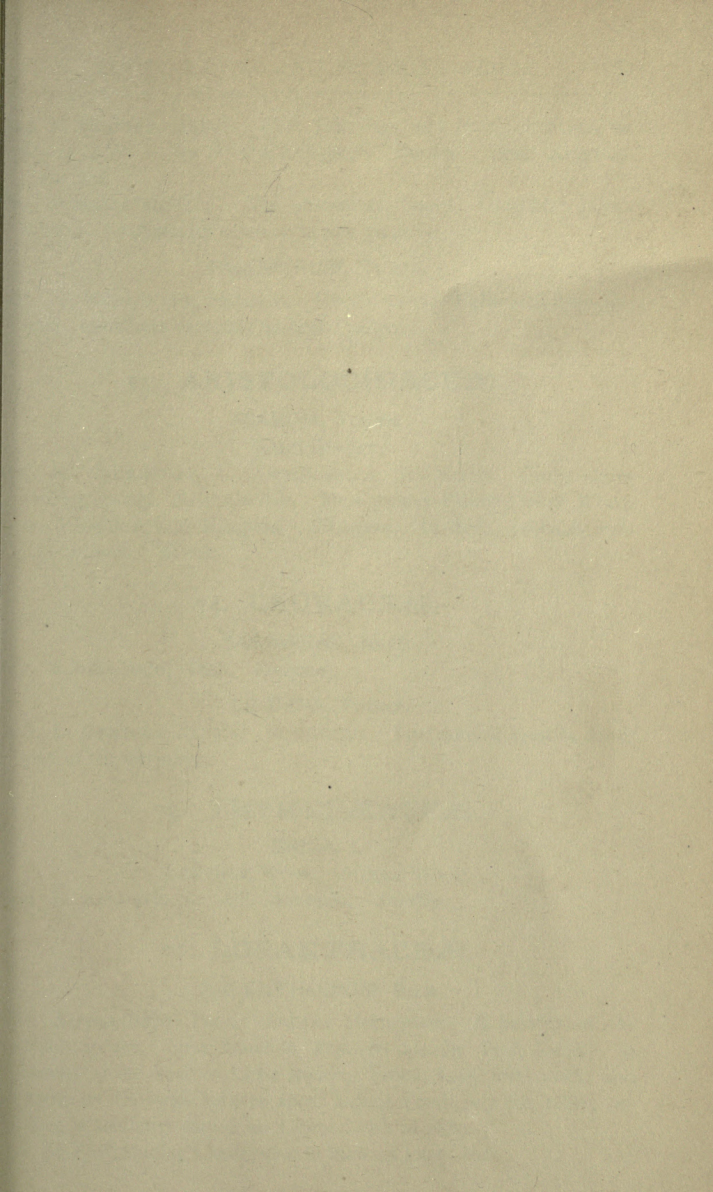
598. *P. acre*, HBK. WATER SMARTWEED. Frequent in swamps. *Dudley*.

599. *P. virginianum*, L. Shaded rich soil near Kingston. *Thurston*. Opp. Duryea. *Dudley*.

600. *P. arifolium*, L. TEAR-THUMB. Lower Lackawanna Valley; in marsh W. of Tobyhanna; Leggitt's Gap, etc. *Dudley*.

601. *P. sagittatum*, L. Tobyhanna, 1881. *Prof. Porter*. Mocanaqua; pond opp. Duryea; Leggitt's Gap, etc. *Dudley*.

602. *P. convolvulus*, L. BLACK BINDWEED. Frequent.



603. *P. cilinode*, MICHX. Near Dunnings, and near Tobyhanna, on D., L. & W. R. R.; toward Lehigh P. *Dudley*. About Kingston. *Thurston*.

604. *P. dumetorum*, L. Var. *scandens*, GRAY. CLIMBING BUCKWHEAT. Apparently common in low grounds.

FAGOPYRUM, TOURN.

605. *F. ESCULENTUM*, MOENCH. BUCKWHEAT. Cultivated from Europe; sometimes escaped; in herb. *Davis*.

73. ARISTOLOCHIACEÆ.

ASARUM, TOURN.

WILD GINGER.

606. *A. Canadense*, L. Occasional in rich woods. Gorge above Falling Spring. *Miss Carlson*. Near Ashley Planes; below Woodward Breaker, near Kingston. *Thurston*. In herb.; probably from within limits. *Davis*.

74. LAURACEÆ.

SASSAFRAS, NEES.

607. *S. officinale*, NEES. Frequent.

LINDERA, THUNB.

608. *L. Benzoin*, BLUME. SPICE-BUSH. Frequent, at least in lower part of our territory.

75. THYMELÆACEÆ.

DIRCA, L.

LEATHER WOOD. MOOSE WOOD.

609. *D. palustris*, L. Elk Mountain. *Dudley*.

76. LORANTHACEÆ.

ARCEUTHOBium, BIEB.

610. *A. pusillum*, PECK. DWARF MISTLETOE. A parasite on the black spruce. First found in Pennsylvania, by Prof. Dudley, in swamp at the head of Little Roaring Brook, June 30th, 1886; also found on the dwarf spruces about Lehigh Pond, July 6th, 1886; noticed at the latter station on a second visit in 1889.

In Prof. Dudley's herb., also in herb. of Lack. Inst.

77. SANTALACEÆ.

COMANDRA, NUTT.

611. *C. umbellata*, NUTT. Penobscot Knob, frequent. *Dudley*.
Campbell's Ledge; Woodward Hill, near Kingston. *Thurston*.
Slocum's Summit, near Pittston. *Miss Carlson*.

78. EUPHORBIACEÆ.

EUPHORBIA, L.

SPURGE.

612. *E. maculata*, L. CREEPING S. Common.
613. *E. Preslii*, GUSS. (*E. hypericifolia*, 5th ed. Man.) Probably
frequent. Reported from Archbald, Scranton, Wyoming, Kingston,
etc.

ACALYPHA, L.

614. *A. Virginica*, L. Ledges near Keyser Valley; Scranton, in
herb.; Duryea. *Dudley*. Frequent about Kingston. *Thurston*.

79. URTICACEÆ.

ULMUS, L.

ELM.

615. *U. fulva*, MICHX. SLIPPERY ELM. Lower Lackawanna Valley.
Dudley. Carpenter's Island, near Pittston. *G. B. Stone*.
616. *U. Americana*, L. WHITE ELM. Common.

CELTIS, TOURN.

HACKBERRY.

617. *C. occidentalis*, L. South of Everhart's Island, and south of
Lackawanna Station, near the river; grove by the Susquehanna, opp.
Wilkes-Barre, several large trees; shade trees, Maple St., Kingston.
Dudley.

HUMULUS, L.

HOP.

618. *H. LUPULUS*, L. Sometimes escaping; in herb. of R. N. Davis.

MORUS, TOURN.

MULBERRY.

619. *M. rubra*, L. RED M. Near road S. of Lackawanna Station; woods back of Red Shale Ledge, Mocanaqua; by river above Kingston. *Dudley*.

620. *M. alba*, L. WHITE M. Beach Haven. *Davis*.

URTICA, TOURN.

NETTLE.

621. *U. gracilis*, AIT. SLENDER N. Common by fences, etc.

LAPORTEA, GAUDICHAUD.

WOOD NETTLE.

622. *L. canadensis*, GAUD. In moist rich woods; common.

PILEA, LINDL.

CLEARWEED.

623. *P. pumila*, GRAY. Common.

BOEHMERIA, JACQ.

FALSE NETTLE.

624. *B. cylindrica*, WILLD. Near Black Cr. above breaker at Mocanaqua, in herb.; by bridge near Duryea. *Dudley*.

PARIETARIA, TOURN.

PELLITORY.

625. *P. pennsylvanica*, MUHL. Ledges above Taylorville; near Black River Falls. *Dudley*.

80. PLATANACEÆ.

PLATANUS, L.

SYCAMORE. BUTTONWOOD.

626. *P. occidentalis*, L. Along the Lackawanna and Susquehanna rivers.

81. JUGLANDACEÆ.

JUGLANS, L.

WALNUT.

627. *J. cinerea*, L. WHITE WALNUT. BUTTERNUT. Duryea; lower Lackawanna Valley; along the Susquehanna. *Dudley*.
628. *J. nigra*, L. BLACK WALNUT. Occasional. *Davis*. Scarce in Lackawanna Valley from Scranton to Pittston; along the Susquehanna; abundant by river below Wilkes-Barre; also above the Wyoming Valley to Ulster. *Dudley*.

CARYA, NUTT.

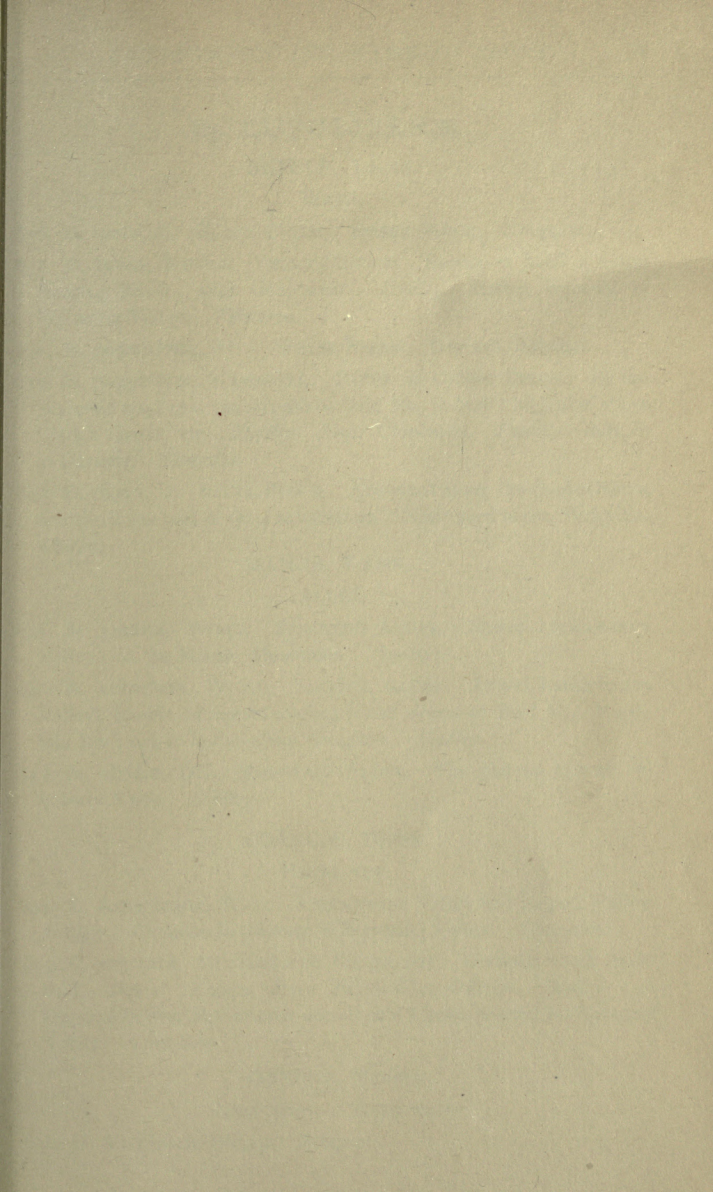
HICKORY.

629. *C. alba*, NUTT. SHAGBARK HICKORY. Woods, frequent. It has a destructive enemy in the "twig girdler" (*Oncideres cingulatus*, SAY). I counted six girdled twigs on a single branch, spring of '92.
630. *C. tomentosa*, NUTT. WHITE-HEART HICKORY. MOCKERNUT. Rather frequent throughout.
631. *C. microcarpa*, NUTT. Lower Lackawanna Valley (?); near Red Shale Ledges, Mocanqua. *Dudley*.
632. *C. porcina*, NUTT. PIGNUT HICKORY. Campbell's Ledge woods, etc. *Dudley*.
633. *C. amara*, NUTT. BITTERNUT HICKORY. Near Lack. R. above Pittston, also near its mouth; Duryea; by ravine near Shickshinny; near Kingston. *Dudley*.

82. MYRICACEÆ.

MYRICA, L.

634. *M. Gale*, L. SWEET GALE. Pond south of Waymart; L. Henry *Dudley*.
- A form with leaves *bright green* and strongly resinous-dotted both sides, differing especially in the former character from all specimens seen from this country or Europe, occurs at Tobyhanna. *Dudley*.
635. *M. asplenifolia*, Endl. (*Comptonia asplenifolia*, Ait.) SWEET FERN. Common in all dry woods.



83. CUPULIFERÆ.

BETULA, TOURN.

BIRCH.

636. *B. lenta*, L. BLACK BIRCH. SWEET BIRCH. Frequent.
637. *B. lutea*, MICHX. YELLOW BIRCH. Swamp at head of Little Roaring Brook; near Gouldsboro. *Dudley*. Rather frequent in Wyoming Valley. *Thurston*.
638. *B. populifolia*, AIT. WHITE BIRCH. Dry soil, frequent.
639. *B. papyrifera*, MARSHALL. PAPER or CANOE BIRCH. By the mountain road near the summit of Bald Mt., in herb.; high hills above Clark's Green, etc. *Dudley*. Near Chinchilla. *Davis*. Cliffs S. of Luzerne. *Thurston*.
640. *B. nigra*, L. RIVER BIRCH. Abundant along the Susquehanna and the lower part of the Lackawanna. None seen above Peckville. *Dudley*.

ALNUS, TOURN.

ALDER.

641. *A. incana*, WILLD. SPECKLED ALDER. Lower Lackawanna Valley; on the Moosic Mountains. *Dudley*.
642. *A. serrulata*, WILLD. SMOOTH ALDER. Lower Lackawanna Valley; Moosic Mountain slopes; lower slopes of Bald Mt.; Mountain Inn road, in herb.; about Kingston. *Dudley*.
643. *A. viridis*, DC. MOUNTAIN ALDER. The plateau east of Penobscot Knob. *Dudley*.

CORYLUS, TOURN.

HAZEL-NUT.

644. *C. Americana*, WALT. Lackawanna Valley and Keyser Valley. *Dudley*. Common in thickets of Wyoming Valley. *Thurston*.
645. *C. rostrata*, Ait. BEAKED HAZEL-NUT. Common about Archbald. *Davis*. Ledges above Taylorville; Duryea. *Dudley*. A few shrubs near Shavertown are all that I have noticed in Wyoming Valley. *Thurston*.

OSTRYA, MICHEL.

IRON-WOOD. DEER WOOD.

646. *O. Virginica*, WILLD. Frequent.

CARPINUS, L.

647. *C. Caroliniana*, WALTER. BLUE BEECH. WATER BEECH.
Along all the streams. *Dudley*.

QUERCUS, L.

648. *Q. alba*, L. WHITE OAK. Common.
649. *Q. bicolor*, Willd. SWAMP WHITE OAK. Above Leggett's Gap;
near head of Little Roaring Brook; Black Run near Mocanaqua.
Dudley.
650. *Q. Prinus*, L. CHESTNUT OAK. Frequent on the mountains.
651. *Q. prinoides*, Willd. E. of Penobscot Knob. *Dudley*.
652. *Q. rubra*, L. RED OAK. Common.
653. *Q. coccinea*, Wang. SCARLET OAK. Bald and Moosic Mt.
slopes; frequent along the Lackawanna R.; Susquehanna, near
Plymouth and Mocanaqua. *Dudley*.
654. *Q. coccinea*, Wang. Var. *TINCTORIA*, Gray. YELLOW OAK.
Frequent.
655. *Q. ilicifolia*, Wang. BLACK SCRUB-OAK. Abundant on the
mountains, descending into the valleys at Taylorville. *Dudley*. Lu-
zerne, etc. *Thurston*.

CASTANEA, TOURN.

656. *C. sativa*, Mill. Var. *AMERICANA*. CHESTNUT. Common in
dry mountain woods.

FAGUS, TOURN.

657. *F. ferruginea*, Ait. BEECH. Along the river below Scranton;
toward Dunmore; on the mountain slopes, and abundant in the richer
woods outside the valleys.

84. SALICACEÆ.

SALIX, TOURN.

658. *S. nigra*, Marshall. BLACK WILLOW. Abundant along the
Susquehanna R. from the New York line to Mocanaqua; on the
Lackawanna R.; low grounds on the mountains, and abundant along
streams outside the valleys. Its sister species *S. amygdaloides* has
not been observed in the Susquehanna Valley or tributaries either in
New York or Pennsylvania. *Dudley*.

659. *S. lucida*, Muhl. SHINING WILLOW. Near the Susquehanna above Falling Spring, and near Duryea. *Dudley*.
660. *S. FRAGILIS*, L. A willow with light olive green smooth bark, introduced and planted for the protection of the banks of streams. Near the Susquehanna below Tunkhannock; by the R. R. below Wilkes-Barre; near Mocanaqua. *Dudley*.
661. *S. ALBA*, L. Var. *VITELLINA*, Koch. Frequent in Wyoming Valley; planted in private grounds, also found along streams.
662. *S. alba* x *lucida* (hybrid, the No. 844 of the Cayuga Flora), Duryea, and along the Susquehanna. *Dudley*.
663. *S. BABYLONICA*, Tourn. WEEPING WILLOW. Planted in Kingston, etc.
664. *S. longifolia*, Muhl. Near Kingston. *Thurston*. Sand bars of the Susquehanna above Pittston. *Dudley*.
665. *S. rostrata*, Richardson. Abundant on the Pocono Mts., Penobscot Knob, Mountain Inn road, etc. *Dudley*.
666. *S. discolor*, Muhl. PUSSY WILLOW. Mountains in wet places, and near the rivers, frequent. *Dudley*.
667. *S. humilis*, Marsh. Frequent on the mountains, and the wooded banks of streams in the valleys. One of the earliest willows. *Dudley*.
668. *S. tristis*, Ait. DWARF WILLOW. A small gray willow. E. of Penobscot Knob; opposite Duryea. *Dudley*.
669. *S. sericea*, Marsh. SILKY WILLOW. Frequent in the Lackawanna Valley; Pocono Mts.; lake E. of Glen Summit; Penobscot Knob; Atherton's Pond, etc. *Dudley*.
670. *S. petiolaris*, Smith. Banks of Moosic Lake abundant, and probably elsewhere. *Dudley*.
671. *S. cordata*, Muhl. HEART-LEAVED WILLOW. Lackawanna Valley; Wyoming Valley; lake east of Glen Summit, etc. *Dudley*.
672. *S. cordata* x *S. sericea*. In the old bed of Toby's Creek above Kingston. *Thurston*.
673. *S. myrtilloides*, L. On the islands in L. Henry.

POPULUS, TOURN.

674. *P. tremuloides*, Michx. QUAKING ASPEN. Common.
675. *P. grandidentata*, Michx. Frequent.

676. *P. BALSAMIFERA*, L. Var. *CANDICANS*, Gray. BALM OF GILEAD. Several middle-sized trees along the Susquehanna above Kingston; near Mocanaqua. *Dudley*.

Populus alba (the Silver Poplar), with downy white leaves, is frequently planted in towns. *P. dilatata* (Lombardy Poplar) is planted. "The single tree near Dickson Sta. was probably planted." *Davis*.

85. CERATOPHYLLACEÆ.

CERATOPHYLLUM, L.

HORNWORT.

677. *C. demersum*, L. Pond in lower Lackawanna Valley; at Gouldsboro; L. Henry, abundant. *Dudley*.

GYMNOSPERMS.

86. CONIFERÆ.

PINUS, Tourn.

PINE.

678. *P. Strobus*, L. WHITE P. Common on the hills.

679. *P. rigida*, MILL. PITCH PINE. Frequent on dry hills.

680. *P. inops*, Ait. SCRUB PINE. Frequent on barren hills in Wyoming Valley.

681. *P. resinosa*, Ait. RED PINE. Campbell's Ledge, a single tree. *Thurston*. Frequent on the cliffs, up the Susquehanna, from Campbell's Ledge. *Dudley*.

PICEA, LINK.

SPRUCE.

682. *P. nigra*, Link. BLACK S. Swamp at head of Little Roaring Brook; about Lehigh P.; near Tobyhanna, and elsewhere on the Pocono plateau. *Dudley*. Moss' Swamp, N. of Luzerne. *G. B. Stone*.

TSUGA, CARRIERE.

HEMLOCK.

683. **T. Canadensis**, Carr. Frequent. A small grove of magnificent old trees above Shavertown. *Thurston*.

ABIES, LINK.

FIR. BALSAM FIR.

684. **A. balsamea**, Miller. Lehigh P. and woods near; near Tobyhanna, in swamp; E. of Gouldsboro; Pocono Summit. *Dudley*.

LARIX, TOURN.

LARCH.

685. **L. Americana**, MICHX. TAMARACK. On the mountains about Lehigh Pond; Pocono Summit; swamp near Broderick, in the Wyoming Valley, a single tree, dead. *Dudley*. In Moss' Swamp, N. of Luzerne, several trees. *G. B. Stone*.

JUNIPERUS, L.

JUNIPER.

686. **J. Virginiana**, L. RED CEDAR. Campbell's Ledge, abundant. *Davis, Dudley*.

TAXUS, TOURN.

YEW.

687. **T. Canadensis**, WILLD. GROUND HEMLOCK. In deep woods. *Davis*. Swamp near Mountain Inn road; near Atherton's Pond. *Dudley*. Occasional in Wyoming Valley. *Thurston*.

MONOCOTYLEDONS.

87. ORCHIDACEÆ.

MICROSTYLIS, NUTT.

688. *M. ophioglossoides*, NUTT. Woods W. of Archbald. *Davis*. Pocono Summit. *Col. Price*. Campbell's Ledge. *Thurston*. Wind Fall, half a mile S. of Pocono Summit; Bald Mt.; Tobyhanna; E. of Penobscot Knob. *Dudley*.

LIPARIS, RICHARD.

TWAYBLADE.

689. *L. liliifolia*, RICHARD. Campbell's Ledge (in Miss Gilmore's herb.) Wilkes-Barre Mt., a large bed. *Thurston*.

CORALLORHIZA, HALLER.

CORAL-ROOT.

690. *C. multiflora*, Nutt. Lynn, in herb. *Davis*. Woods on Bald Mountain slope; woods near L. Henry. *Dudley*. Occasional in Wyoming Valley. *Thurston*.

SPIRANTHES, RICHARD.

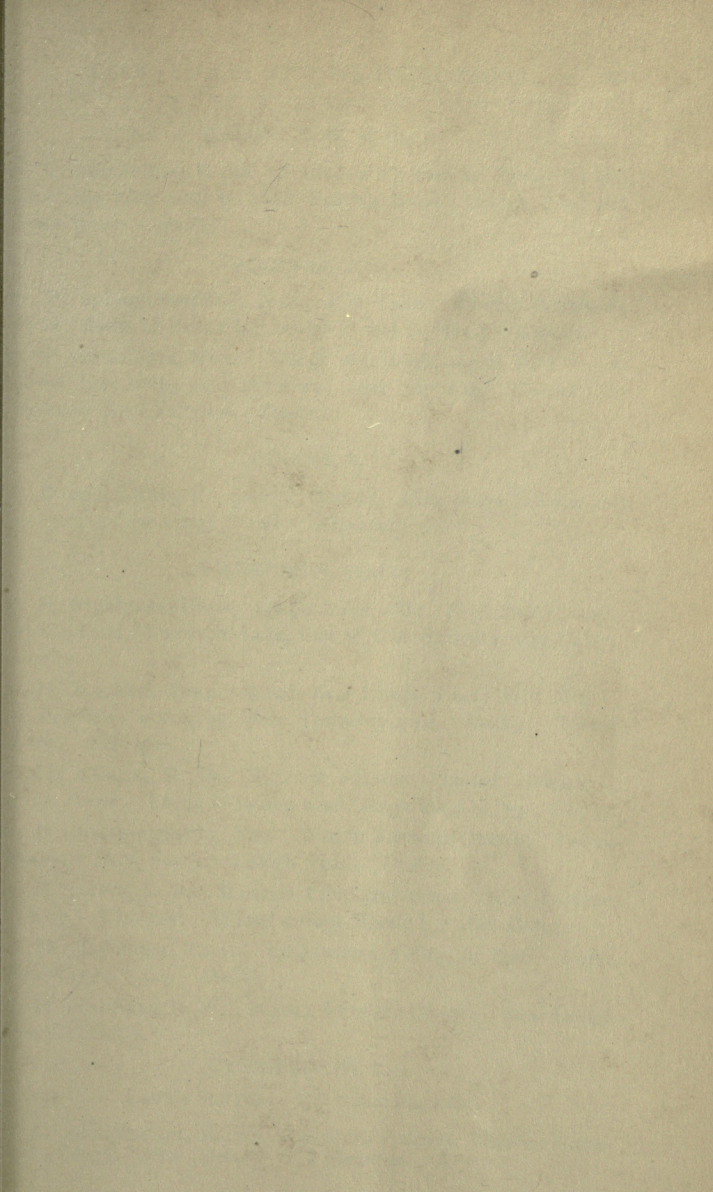
LADIES' TRESSES.

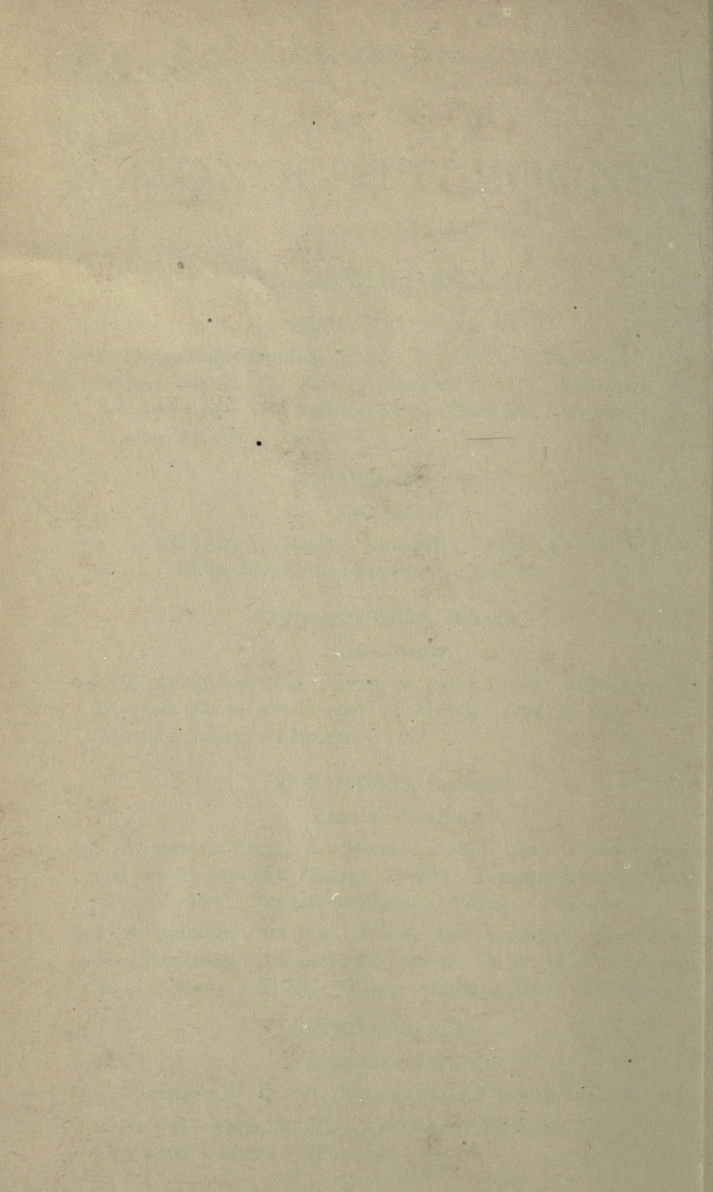
691. *S. cernua*, RICHARD. Moosic L., 1881. *Prof. Porter*. Penobscot Knob; near Mt. Ararat. *Dudley*. Frequent near Tompkinsville. *Graves*. Not rare in Wyoming Valley. *Thurston*.
692. *S. gracilis*, BIGELOW. Woods near Scranton. *Mrs. Beeber*. Also found near Scranton by *Mr. Reeves*. On Mt. W. of Carbondale; W. of Jermyon; Bald Mt. *Graves*. Luzerne Glen. *Thurston*.

GOODYERA, R. BR.

RATTLESNAKE-PLANTAIN.

693. *G. repens*, R. Br. (?). Pocono Summit Swamp. *Dudley*.
694. *G. pubescens*, R. Br. Woods near Scranton. *Mrs. Beeber*. Glen above Luzerne. *Thurston*.





CALOPOGON, R. BR.

95. *C. pulchellus*, R. Br. Atherton's P.; road to Moosic L. and about the lake; road to Little Roaring Brook; Lehigh Pond and Lake Henry. *Dudley*.

POGONIA, JUSS.

96. *P. ophioglossoides*, Nutt. Lily Lake. *Davis*. Atherton's Pond; shores of Moosic L.; Lehigh P. and L. Henry. *Dudley*.
 97. *P. verticillata*, NUTT. Woods near brook, top of Bald Mt.; in flower June 10th; near Dunmore; near Nay Aug. *Graves*. On mountain E. of Fairview. *Dudley*.

ORCHIS, L.

98. *O. spectabilis*, L. SHOWY ORCHIS. Glen above Luzerne and along "Ice Cave Gorge;" rare. *Thurston*.

HABENARIA, WILLD.

99. *H. tridentata*, HOOK. Moosic Lake, 1884. *Prof. Porter*. Atherton's Pond; Reservoir Lake, east of Glen Summit; near Dalton. *Dudley*.
 100. *H. Hookeri*, TORR. Woods near Lehigh Pond; Bald Mt.; E. of Fairview; woods by Scott Township road. *Dudley*. Tilbury Knob. *Thurston*.
 101. *H. ciliaris*, R. Br. YELLOW FRINGED-ORCHIS. Moosic L. *Prof. Porter*. Found in swamp near Lehigh Pond in '89. *Dudley*.
 102. *H. blephariglottis*, Torr. WHITE FRINGED-ORCHIS. Pocono Station. *Prof. Porter*. Lehigh Pond. *Dudley*.
 103. *H. lacera*, R. Br. RAGGED FRINGED-ORCHIS. Near Lehman, in herb. *Thurston*. By road toward Moosic L. *Mr. Reeves*.
 104. *H. psycodes*, GRAY. Lackawanna Valley, in herb. *Davis*. Near Crystal Lake. *Dudley*.
 105. *H. fimbriata*, R. Br. PURPLE FRINGED-ORCHIS. Near Lehigh Pond. *Dudley*.

CYPRIPEDIUM, L.

LADY'S SLIPPER. MOCCASIN FLOWER.

106. *C. parviflorum*, SALISB. Inkerman's woods, Pittston; Campbell's Ledge. *Miss Carlson*. Elk Mountain. *Graves*.

707. *C. pubescens*, WILLD. Campbell's Ledge. *Dudley*. Frequent in Wyoming Valley; I counted over fifty plants in an hour's walk on Wilkes-Barre Mt. *Thurston*.
708. *C. spectabile*, SALISB. SHOWY LADY'S-SLIPPER. Near Mud Pond, near Smithville, five miles from Pittston. *Etta Rozelle*. Near Clark's Green, in herb. *Prof. N. S. Davis*.
709. *C. acaule*, Ait. STEMLESS LADY'S-SLIPPER. Woods W. of Lehigh Pond, in herb. *Dudley*. Near Kingston. *Mrs. J. H. Race*. Near Plainsville, in herb. *Davis*. Nay Aug Falls; Campbell's Ledge. *Graves*. Near Pittston. *Miss Carlson*.

88. HÆMODORACEÆ.

ALETRIS, L.

710. *A. farinosa*, L. On the Camel's Back (evidently Campbell's Ledge is meant), near Pittston. *Prof. Porter*.

89. IRIDACEÆ.

IRIS, TOURN.

FLOWER-DE-LUCE.

711. *I. versicolor*, L. Common.

SISYRINCHIUM, L.

BLUE-EYED GRASS.

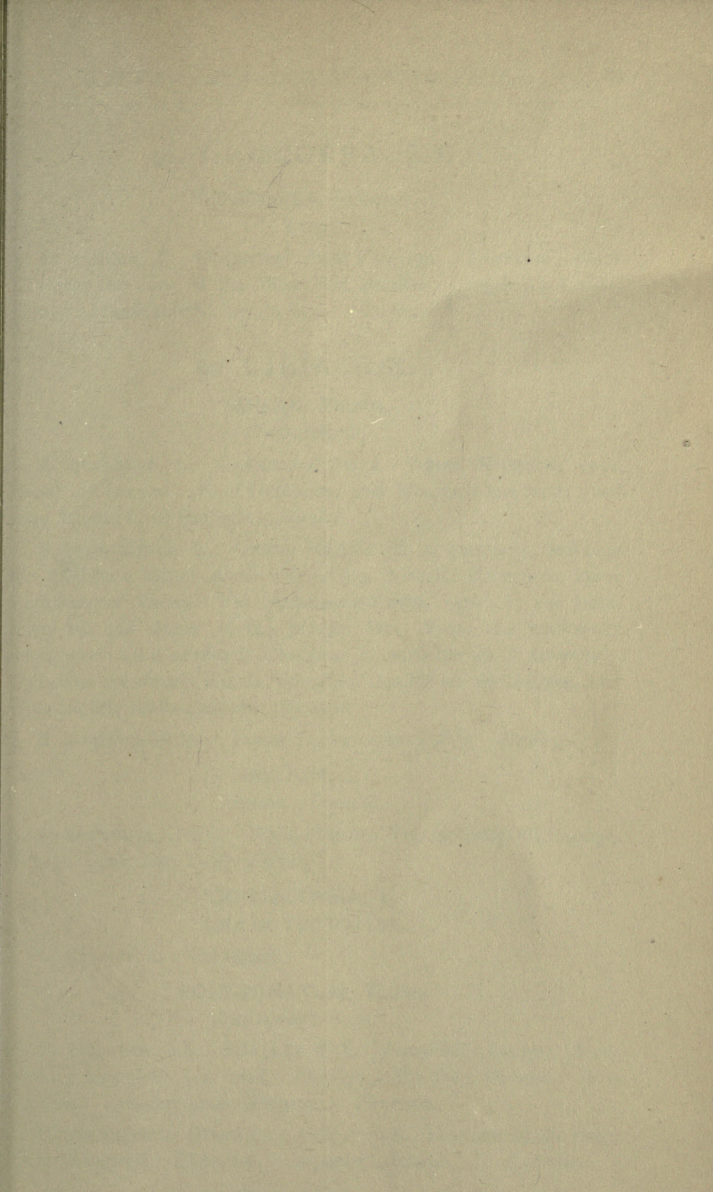
712. *S. angustifolium*, MILL. (*S. Bermudiana*, var. *mucronatum*, Gray.) Ravine by Bald Mt. *Dudley*.
713. *S. anceps*, CAV. (*S. Bermudiana*, var. *anceps*, Gray.) Common. Var. *albidum*. First discovered in Pennsylvania at Naomi Pines, June, 1889, by Prof. Porter.

90. AMARYLLIDACEÆ.

HYPOXIS, L.

STAR-GRASS.

714. *H. erecta*, L. Frequent, at least in lower Lackawanna and Wyoming Valleys.



91. DIOSCOREACEÆ.

DIOSCOREA, PLUMIER.

YAM.

715. *D. villosa*, L. Occasional about Kingston. *Thurston*. Black Cr., near the mine of the West End Breaker; Campbell's Ledge; Lower Lackawanna Valley, in herb. *Dudley*.

92. LILIACEÆ.

SMILAX, TOURN.

GREENBRIER.

716. *S. herbacea*, L. CARRION-FLOWER. About Kingston, occasional. *Thurston*. E. of Dunmore; near Mountain Inn road; road from Moosic L. to Paupack. *Dudley*.
717. *S. rotundifolia*, L. GREEN BRIER. E. of Dunmore, and near the sandstone ledges above Taylorville, in herb.; frequent in lower Lackawanna Valley. Var. *quadrangularis*, Gray, is not infrequent on the slopes of the Moosic Mts. From the inadequate description of this *variety* it is liable to be mistaken for *S. tamnoides*. Its leaves are oblong usually, spinulose toothed on the margin, and often slightly fiddle-shaped. *Dudley*.
718. *S. hispida*, MUHL. Lower Lackawanna Valley. *Dudley*.

ALLIUM, L.

ONION. GARLIC.

719. *A. cernuum*, ROTH. WILD ONION. Top of Campbell's Ledge, in herb. Lack. Inst. *Mr. Reeves*.

CONVALLARIA, L.

LILY OF THE VALLEY.

- C. MAJALIS*, L. Cultivated.

POLYGONATUM, TOURN.

SOLOMON'S SEAL.

720. *P. biflorum*, Ell. SMALLER S. S. Campbell's Ledge; Moca-naqua; Mountain Inn road. *Dudley*. Slocum's Summit. *Miss Carlson*. Frequent about Kingston. *Thurston*.
721. *P. giganteum*, DIETRICH. GREAT S. S. Frequent by the river, above Kingston. *Thurston*. Carpenter's Island. *G. B. Stone*.

ASPARAGUS, TOURN.

722. *A. OFFICINALIS*, L. GARDEN ASPARAGUS. Cultivated from Europe; sometimes escaped. Mocanaqua. *Dudley*. Around Kingston. *Thurston*

SMILACINA, DESF.

FALSE SOLOMON'S SEAL.

723. *S. racemosa*, Desf. Frequent.
724. *S. stellata*, Desf. Bog between Gouldsboro and Tobyhanna. *Dudley*.
725. *S. trifolia*, Desf. Lehigh P.; swamp near Gouldsboro; swamp at head of Little Roaring Brook. *Dudley*.

MAIANTHEMUM, WIGG.

726. *M. Canadense*, Desf. (*Smilacina bifolia*, var. *Canadensis* Gray.) Very common.

STREPTOPUS, MICHX.

TWISTED-STALK.

727. *S. roseus*, Michx. Glen above Luzerne. *Thurston*.

CLINTONIA, RAF.

728. *C. borealis*, Raf. Near Archbald "pot hole." *Davis*. Near Lehigh P. and in swamp N. E. of Tobyhanna. *Dudley*. Occasional in cold woods in Wyoming Valley. *Thurston*.

UVULARIA, L.

BELLWORT.

729. *U. perfoliata*, L. Common.

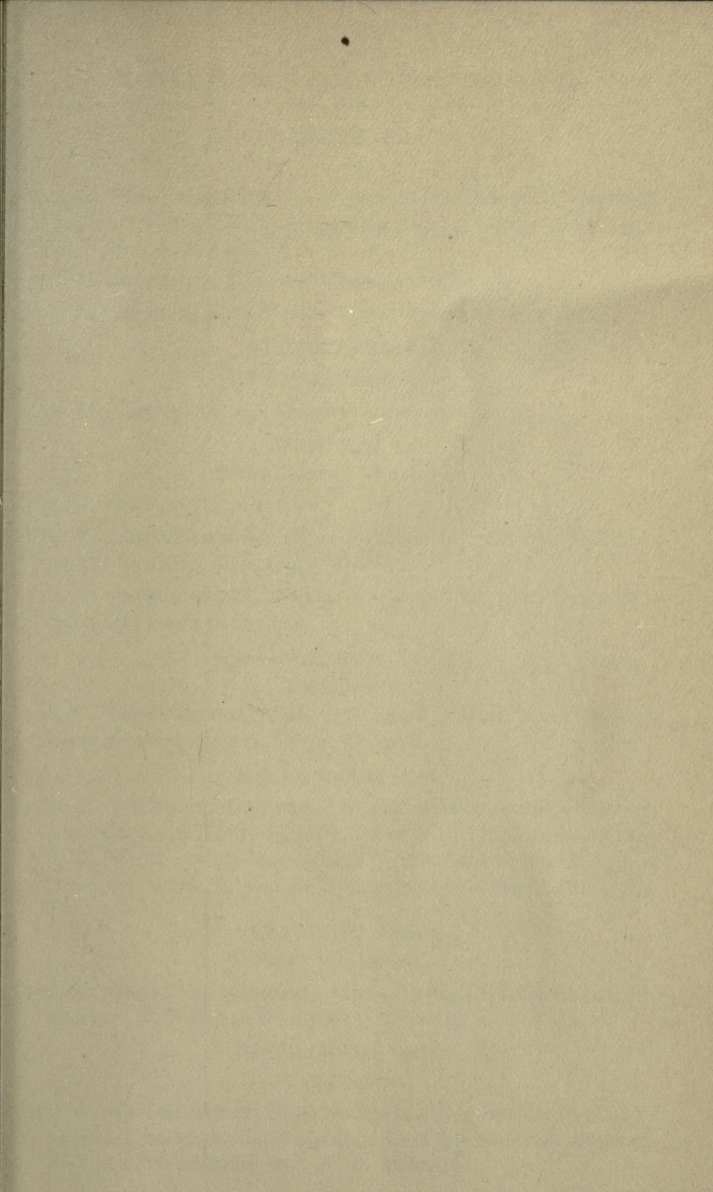
OAKESIA, WATSON.

730. *O. sessilifolia*, WATSON. (*Uvularia sessilifolia*, 5th ed. Man.) Common.

ERYTHRONIUM, L.

DOG'S-TOOTH VIOLET.

731. *E. Americanum*, Ker. YELLOW ADDER'S TONGUE. Plainsville, in herb. *Davis*. Carpenter's Island. *Miss Carlson*. Frequent about Kingston, but with few flowers. *Thurston*.



LILIUM, L.

LILY.

732. *L. Philadelphicum*, L. Woods toward Moosic L.; Mountain Inn road; Pocono Mt.; Scott township road. *Dudley*. Near Kingston. *Mrs. J. H. Race*.

733. *L. Canadense*, L. Near Kingston. *Thurston*.

L. TIGRINUM, Ker. TIGER LILY. Cultivated from Asia.

MEDEOLA, GRONOV.

INDIAN CUCUMBER-ROOT.

734. *M. Virginiana*, L. Frequent in rich woods.

TRILLIUM, L.

WAKE ROBIN. BIRTHROOT.

735. *T. erectum*, L. Common.

736. *T. grandiflorum*, Salisb. Elk Mountain. *Dudley*. Abundant on Elk Mountain, May, 1890. *Graves*.

737. *T. erythrocarpum*, Michx. PAINTED TRILLIUM. Frequent in cold damp woods throughout.

CHAMÆLIRIUM, WILLD.

DEVIL'S-BIT.

738. *C. Carolinianum*, Willd. (*C. luteum*, 5th ed. Man.) Wilkes-Barre Mountain, in herb. *Mrs. Thurston*.

MELANTHIUM, LINN.

739. *M. latifolium*, DESROUSS. By the entrance to Black River ravine, Mocanaqua, July 6th, 1889, leaves only. It blossoms in Aug. in Va. Fruit and old leaves rather frequent back of Fairview, E. of Penobscot by R. R. and on Penobscot Knob, Sept. 24th, 1891. *Dudley*.

VERATRUM, TOURN.

FALSE HELLEBORE.

740. *V. viride*, Ait. Common. *Davis*. Lehigh P.; Pocono Summit. *Dudley*. N. of Campbell's Ledge. *Thurston*.

AMIANTHIUM, GRAY.

FLY-POISON.

741. *A. muscætoxicum*, Gray. Abundant in woods on Moosic Mt., W. and S. of Moosic L.; Penobscot Knob and eastward, abundant. *Dudley*. Wilkes-Barre Mt. *E. E. Williams*.

93. PONTEDERIACEÆ.

PONTEDERIA, L.

PICKEREL-WEED.

742. *P. cordata*, L. Wyoming Swamp; Lehigh Pond. *Dudley*.

HETERANTHERA, RUIZ & PAV.

743. *H. graminea*, Vahl. (*Schollera graminifolia*, 5th ed. Man.)
Kingston "Pond Holes." *Thurston*.

94. XYRIDACEÆ.

XYRIS, GRONOV.

744. *X. flexuosa*, Muhl. Var. *pusilla*, Gray. YELLOW-EYED GRASS.
Moosic L. and Tobyhanna Mills. *Prof. Porter*.

95. JUNCACEÆ.

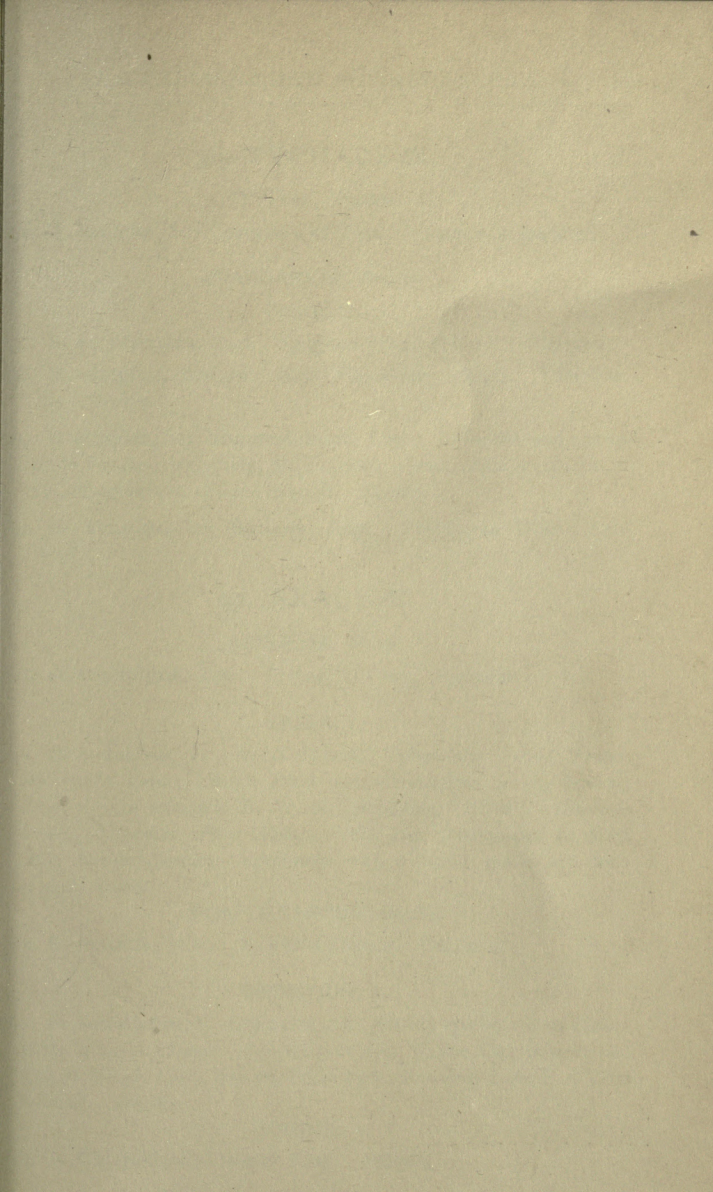
JUNCUS, TOURN.

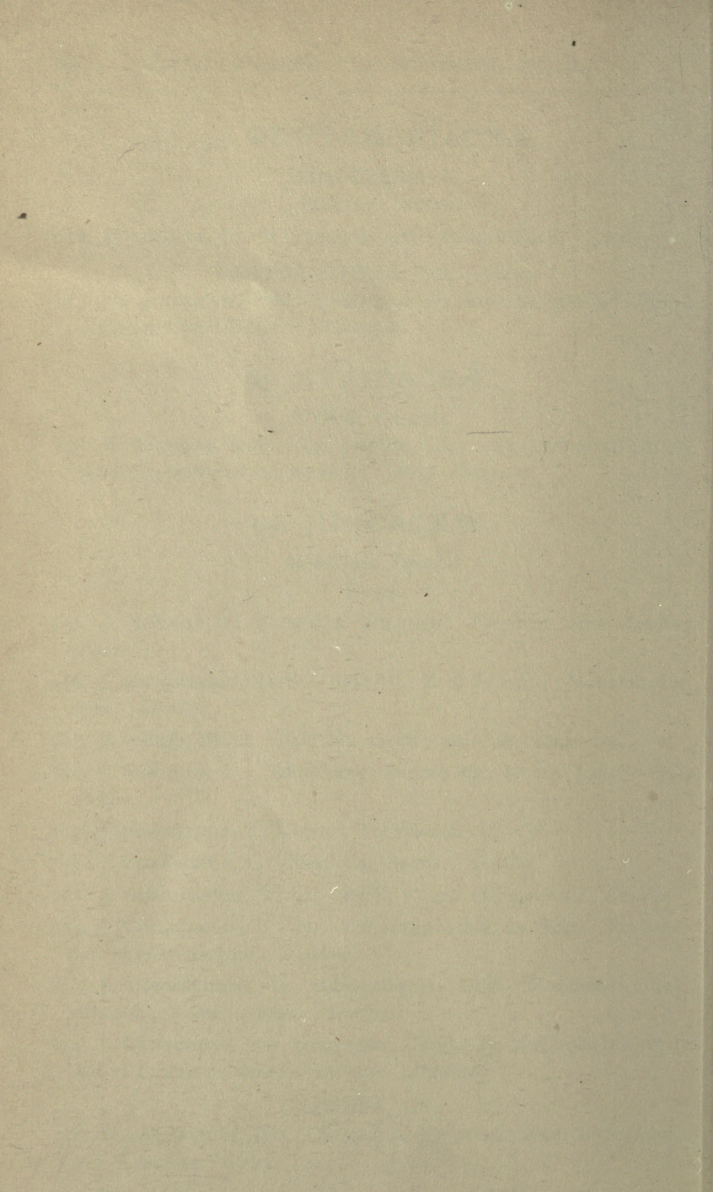
RUSH.

745. *J. effusus*, L. COMMON BULRUSH. Frequent near standing water.
746. *J. marginatus*, Rostk. Bald Mt.; E. of Fairview; Mountain Inn road. *Dudley*.
747. *J. tenuis*, Willd. Bald Mt. woods; near foot-paths, etc.
748. *J. bufonius*, L. Tobyhanna; Pocono Sta.; Moosic Lake. *Prof. Porter*.
749. *J. pelocarpus*, E. Meyer. Tobyhanna. *Porter*.
750. *J. articulatus*, L. Near Tobyhanna. *Dudley*.
751. *J. acuminatus*, Michx. By R. R. east of Fairview. *Dudley*.
752. *J. Canadensis*, J. Gay. Var. *longicaudatus*, Engl. Reservoir east of Glen Summit. *Dudley*.
753. *J. Canadensis*, var. *subcaudatus*, Engl. Mocanaqua; Bald Mountain, a slender form. *Dudley*.
754. *J. Canadensis*, var. *coarctatus*, Engl. By Mountain Inn road; east of Fairview; near Gouldsboro. *Dudley*.

LUZULA, DC.

755. *L. campestris*, DC. Common in dry woods, lower Lackawanna and Wyoming Valleys.





96. TYPHACEÆ.

TYPHA, TOURN.

756. *T. latifolia*, L. COMMON CAT-TAIL. Common in marshes.

SPARGANIUM, TOURN.

BUR-REED.

757. *S. eurycarpum*, Engl. Kingston "Pond Holes." *Thurston*.
 758. *S. simplex*, Hudson. Near Plainsville. *Davis*. Tompkinsville. *Graves*.
 759. *S. simplex*, var. *angustifolium*, Engl. In brooks and springs on the Pocono; big spring, Mt. Pocono; a stout, short erect form, in mud, reservoir east of Glen Summit. *Dudley*.
 760. *S. simplex*, var. *fluitans*, Engl. Tobyhanna Mills. *Prof. Porter*.

97. ARACEÆ.

ARISÆMA, MART.

761. *A. triphyllum*, Torr. INDIAN TURNIP. Frequent.

CALLA, L.

762. *C. palustris*, L. WILD CALLA. Tobyhanna. *Prof. Porter*. Atherton's Pond; Lehigh Pond and all marshes on the Pocono. *Dudley*. On mountain N. W. of Carbondale. *Graves*. Harvey's Lake. *Thurston*. Near Pittston. *Miss Mae Crydenwise*. L. Ariel. *Miss Emily Johnson*. Specimens with a double spathe are occasionally found.

SYMPLOCARPUS, SALISB.

763. *S. fœtidus*, Salisb. SKUNK CABBAGE. Common.

ORONTIUM, L.

764. *O. aquaticum*, L. GOLDEN-CLUB. Swamp one mile E. of Plainsville, in herb. *Davis*. Several ponds in Wayne Co.; flowers and fruit at Moosic Lake, July 10, '89, in herb.; Reservoir Lake E. of Glen Summit. *Dudley*.

ACORUS, L.

765. *A. Calamus*, L. SWEET FLAG. Frequent.

98. LEMNACEÆ.

SPIRODELA, SCHLEIDEN.

766. *S. polyrrhiza*, SCHLEID. Wyoming Sw.; Tobyhanna. *Dudley*.
Kingston "Pond Holes." *Thurston*.

LEMNA, L.

767. *L. perpusilla*, Torr. In a pond near Tobyhanna, June, 1890.
Dudley.
768. *L. minor*, L. Wyoming Swamp. *Dudley*.

99. ALISMACEÆ.

ALISMA, L.

769. *A. Plantago*, L. (Var. *Americanum*, R. and S.) WATER PLANTAIN. Near Wyoming. *Dudley*. Kingston "Pond Holes." *Thurston*.

SAGITTARIA, L.

ARROW-HEAD.

770. *S. variabilis*, Engelm. Mud pond near Tompkinsville; Heart Lake, Tompkinsville. *Graves*. Mouth of Lackawanna River; Kingston, etc. *Dudley*.
771. *S. heterophylla*, Pursh. Kingston "Pond Holes." *Thurston*. Heart Lake, near Tompkinsville. *Graves*.

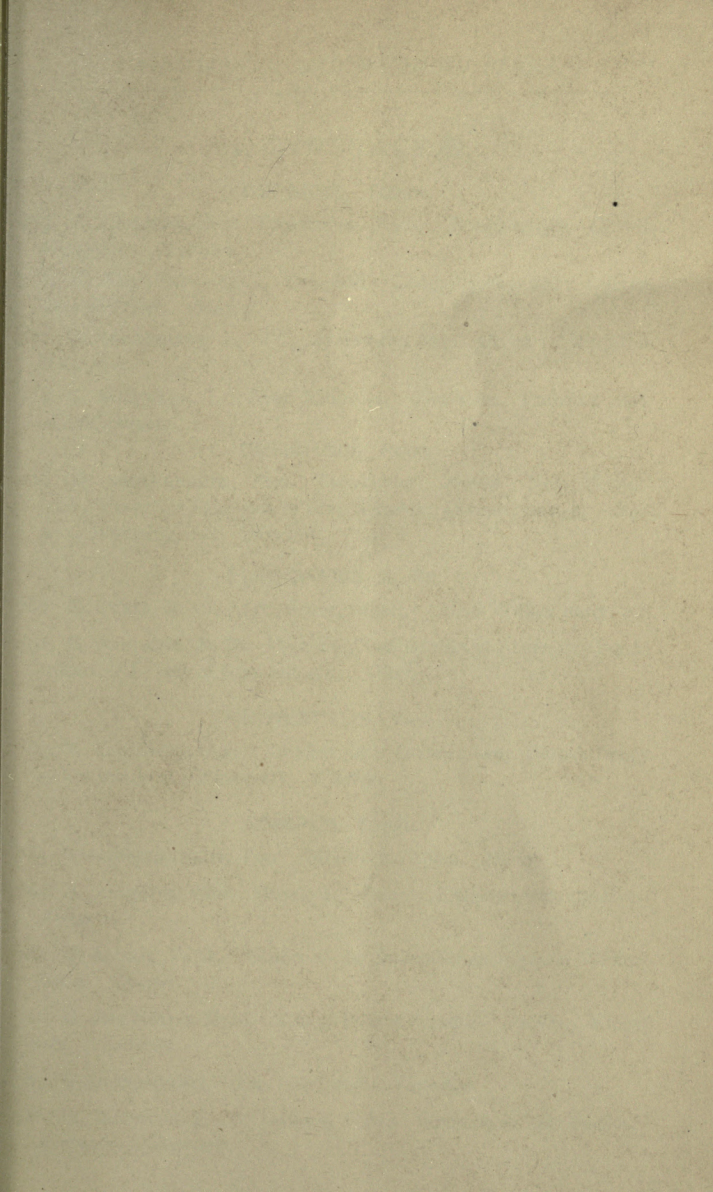
100. NAIADACEÆ.

SCHEUCHZERIA, L.

772. *S. palustris*, L. Tobyhanna Mills. *Prof. Porter*. Ararat Marsh. *Dudley*.

POTAMOGETON, TOURN.

773. *P. natans*, L. Pond in lower Lackawanna Valley; Lake Henry, in herb. *Dudley*.
774. *P. Pennsylvanicus*, Cham. (*P. Claytonii*, Tuck.) Tobyhanna Mills. *Prof. Porter*, *Dudley*. In Lehigh Pond and outlet. *Dudley*.



101. CYPERACEÆ.

CYPERUS, TOURN.

775. *C. diandrus*, Torr. Tobyhanna. *Porter*. Tompkinsville. *Graves*. Kingston. *Thurston*.
776. *C. filiculmis*, Vahl. Campbell's Ledge, rocky soil; Duryea, near the river. *Dudley*.
777. *C. esculentus*, L. (*C. phymatodes*, Man. 5th ed.) Kingston. *Thurston*.
778. *C. strigosus*, L. Near Kingston. *Thurston*. Probably elsewhere frequent.

DULICHIIUM, PERS.

779. *D. spathaceum*, Pers. Tobyhanna. *Porter*. Near Gouldsboro; Reservoir Lake east of Glen Summit; Pocono Summit. *Dudley*. Wyoming Sw. *Thurston*.

ELEOCHARIS, R. BR.

780. *E. ovata*, R. Br. (*E. obtusa*, Schult.) Near Wilkes-Barre, etc.
781. *E. palustris*, R. Br. Wyoming Sw.; borders of Atherton's Pond; Reservoir L. east of Glen Summit. *Dudley*.

FIMBRISTYLIS, VAHL.

782. *F. capillaris*, Gray. In sand near Coxton; near Duryea (many spikes sessile at the ground). *Dudley*.

SCIRPUS, TOURN.

783. *S. subterminalis*, Torr. Moosic L., 1884. *Porter*.
784. *S. pungens*, Vahl. Moosic L. *Porter*. Kingston, near the river. *Thurston*.
785. *S. debilis*, Pursh. Shores of the Susquehanna opposite Wilkes-Barre. *Dudley*.
786. *S. atrovirens*, Muhl. East of Pocono Summit. *Dudley*. Kingston. *Thurston*.
787. *S. polyphyllus*, Vahl. Luzerne. *Thurston*.
788. *S. lacustris*, L. (*S. validus*, Vahl.) Common in "pond-holes," Kingston. *Thurston*.

ERIOPHORUM, L.

789. *E. cyperinum*, L. (*Scirpus Eriophorum*, Mx.) WOOL-GRASS.
Pond near Duryea, and ponds in Susquehanna Co. The slender mountain form at Moosic L., Lehigh Pond, etc.
790. *E. vaginatum*, L. Lehigh Pond; Atherton's Pond; Sinkhole Marsh, Ararat. *Dudley*. Rare in Penn'a, found at only two other stations according to Prof. Porter.
791. *E. Virginicum*, L. Atherton's Pond; Lehigh Pond; Reservoir L. east of Glen Summit; Sinkhole Marsh, Ararat. *Dudley*.
792. *E. polystachyon*, L. Tobyhanna Mills. *Porter*. Lehigh Pond. *Dudley*.
793. *E. gracile*, Koch. Near Pocono Station; Reservoir Lake east of Glen Summit. *Dudley*.

RHYNCHOSPORA, VAHL.

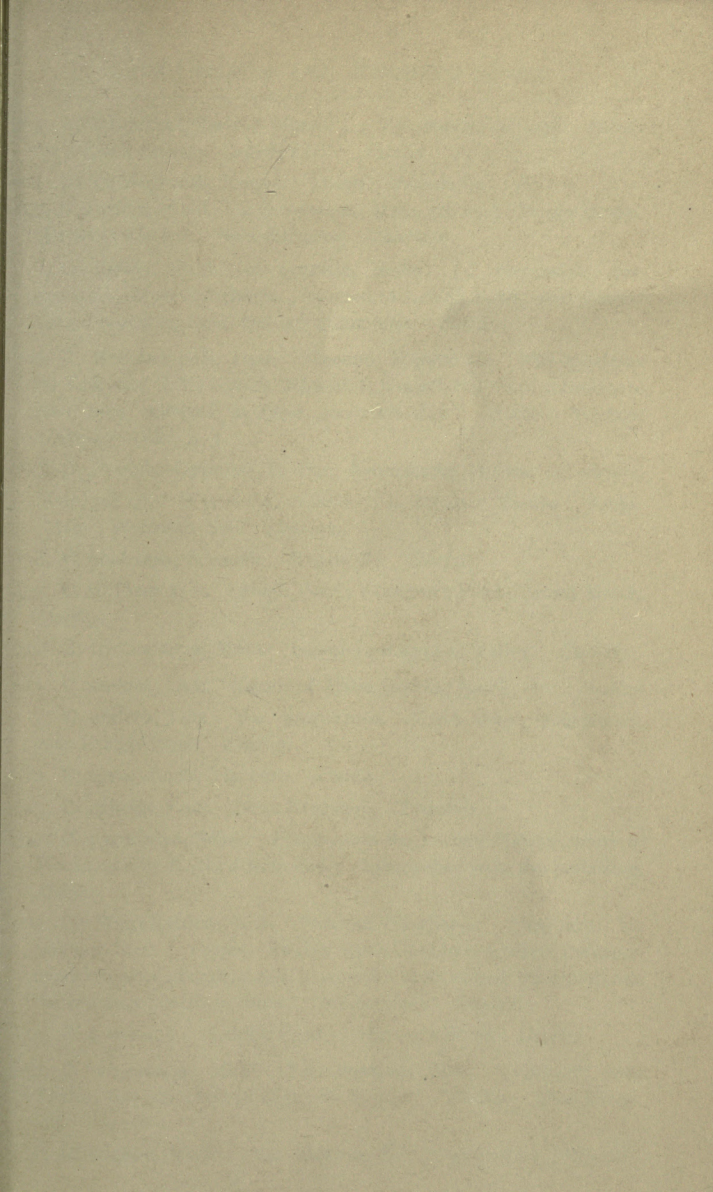
794. *R. alba*, Vahl. Lehigh Pond; Ararat Marsh. *Dudley*.
795. *R. glomerata*, Vahl. Mountain Inn road; Moosic Lake. *Dudley*.

SCLERIA, BERG.

796. *S. triglomerata*, Michx. Rare east of Penobscot Knob. *Dudley*.
797. *S. pauciflora*, Muhl. Rocky woods east of Fairview near I. V. railroad. *Dudley*.

CAREX, RUPPIUS.

798. *C. pauciflora*, Lightf. Sinkhole Marsh, Ararat; Atherton's Pond. Lehigh Pond. *Dudley*. Torrey L., Wayne Co., "very rare." *Porter*.
799. *C. folliculata*, L. Not infrequent on the Pocono plateau; east of Gouldsboro; source of Little Roaring Brook; Pocono Summit; Lehigh Pond; Moosic Lake; Reservoir Lake east of Glen Summit. *Dudley*.
800. *C. intumescens*, Rudge. Tobyhanna. *Porter*. Pocono Summit. *Dudley*. Near Kingston. *Thurston*.
801. *C. Grayii*, Carey. Swamp west of Reservoir Lake, east of Glen Summit. *Dudley*. "Very rare east of the Alleghenies." *Porter*.
802. *C. lupulina*, Muhl. Not rare on the Pocono; near Black Creek. *Dudley*. Kingston. *Thurston*.
- C. oligosperma*, Michx. Monroe Co., the county next east of Lackawanna. *Porter*.



803. *C. utriculata*, Boott. Moosic L.; Tobyhanna. *Porter*. Atherton's Pond, Dalton; Lehigh Pond. *Dudley*.

804. *C. Tuckermani*, Dewey. Pocono, Monroe Co. *Porter*.

805. *C. lurida*, Wahl. (*C. tentaculata*, Man., 5th ed.) On the Pocono plateau. *Dudley*. Near Kingston. *Thurston*.

C. lurida, Wahl., var. *gracilis*, Bailey. (*C. tentaculata*, var. *gracilis*.) Near Tobyhanna; by road to Lehigh Pond; near Pocono Sta.; a mountain form, and not uncommon. *Dudley*.

806. *C. Schweinitzii*, Dew. "Pocono, Monroe Co. The specimen (at Lafayette Coll.) is from Schweinitz himself, but does not seem to have been collected in Penn. since his day" *Porter*. "Carices of Penn.," 1887, p. 3.

807. *C. Pseudo-Cyperus*, L. Var. *Americana*, Hochst. (*C. comosa*, Man., 5th ed.) Wayne Co. *Garber*. L. Henry. *Dudley*. Kingston; Wyoming Sw. *Thurston*.

808. *C. scabrata*, Schwein. Wayne Co. *Garber*.

809. *C. filiformis*, L. Lehigh Pond; Atherton's Pond; Ararat Marsh. *Dudley*.

810. *C. trichocarpa*, Muhl. Lower Lackawanna Valley. *Dudley*.

811. *C. stricta*, Lam. Source of Little Roaring Brook, etc. *Dudley*.

C. stricta, Lam. Var. *angustata*. Marsh above Gouldsboro; near Lehigh Pond. *Dudley*.

812. *C. torta*, Boott. In herb. *Davis*.

813. *C. crinita*, Lam. Near Kingston. *Thurston*.

814. *C. gynandra*, Schw. Frequent on the Pocono Plateau; north of Mocanaqua by R. R.; a form easily distinguished from the preceding. *Dudley*.

815. *C. Magellanica*, Lam. "On the Tunkhanna. Very rare. Its southern limit." *Porter*. Swamp above Gouldsboro; where the specimens are more abundant and have much more obtuse perigynia than the ordinary American forms; Lehigh Pond. *Dudley*.

816. *C. limosa*, L. Lehigh Pond; Atherton's Pond. *Dudley*.

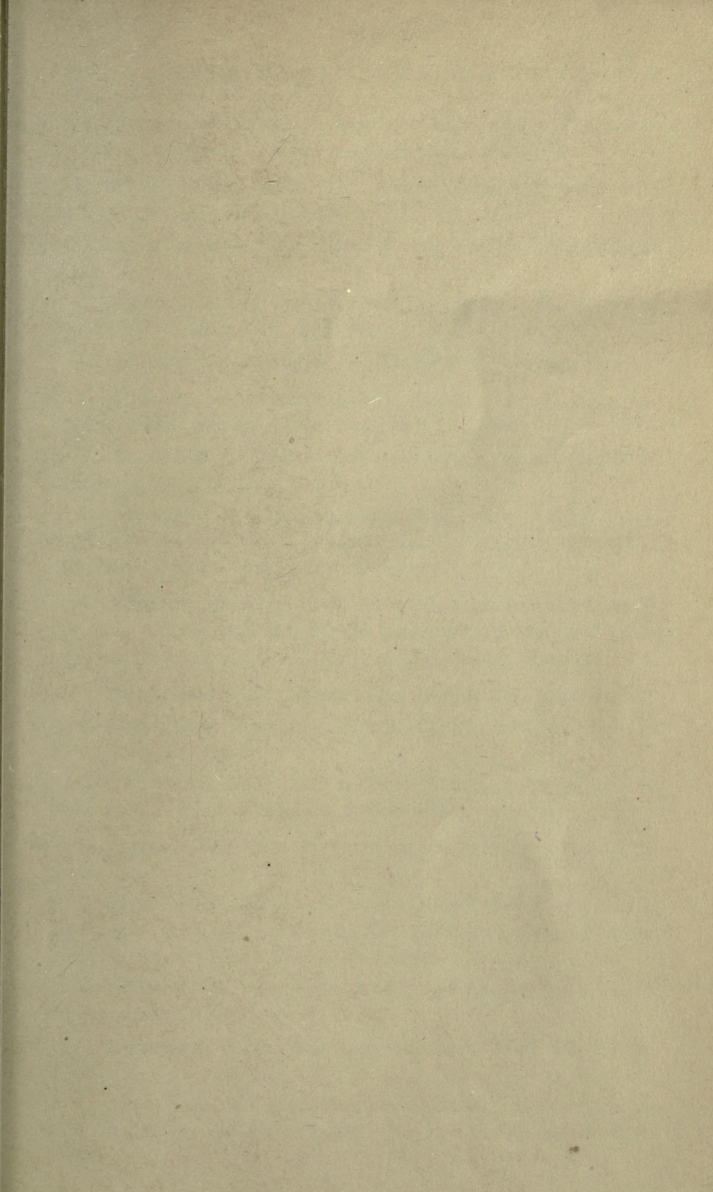
817. *C. virescens*, Muhl. Var. *costata*, Dew. Archbald; near Tayloryville; Campbell's Ledge; Mocanaqua. *Dudley*. Near Kingston. *Thurston*.

818. *C. triceps*, Michx. Var. *hirsuta*, B. Campbell's L. *Dudley*.

819. *C. longirostris*, Torr. By road between Coxton and Falling Spring. *Dudley*.
- 819½. *C. arctata*, Boott. Pocono, Monroe Co. *Porter*.
820. *debilis*, Michx. Var. *Rudgei*, Bailey. L. Henry; E. of Gouldsboro; source of Little Roaring Brook; near Archbald; Moosic Mountains, the latter with perigynia larger than usual. *Dudley*.
821. *C. æstivalis*, M. A. C. Carbondale. *Garber*. By lumber road east of Gouldsboro Sta.; east side of Ararat Peak. *Dudley*. Usually regarded as a very rare species.
822. *C. granularis*, Muhl. Near Crystal L. and north; also grassy places in the valleys. *Dudley*.
823. *C. pallescens*, L. Carbondale. *Garber*. Naomi Pines, 1889; rare, and on its southern limit. *Porter*.
824. *C. Hitchcockiana*, Dew. Beech woods west of Dundaff. *Dudley*. Rare in Penn. *Porter*.
825. *C. laxiflora*, Lam. In several varieties.
826. *C. digitalis*, Willd. Campbell's Ledge; Beech woods west of Dundaff. *Dudley*.
827. *C. laxiculmis*, Schwein. (*C. retrocurva*, Man. 5th ed.) Beech woods west of Dundaff. *Dudley*.
828. *C. platyphylla*, Carey. Beech and maple woods and ravines. *Dudley*.
829. *C. polymorpha*, Muhl. Pocono, Monroe Co. *Porter*.
830. *C. eburnea*, Boott. Campbell's Ledge. *Dudley*.
831. *C. pedunculata*, Muhl. Wooded banks, Lackawanna Valley. *Dudley*.
832. *C. Pennsylvanica*, Lam. Woods, frequent.
833. *C. communis*, Bailey. (*C. varia*, Man., 5th ed.) Bald Mt.; near Taylorville, etc., frequent.
834. *C. stipata*, Muhl. Wet places throughout.
835. *C. teretiuscula*, Gooden. About Lehigh Pond. *Dudley*.
836. *C. vulpinoidea*, Michx. Low grounds. Common.
837. *C. rosea*, Schkuhr. Rocky woods, Campbell's Ledge; Mocaqua; north of Fairview, etc. *Dudley*.

C. rosea, Sch. Var. *radiata*, Dew. Near Archbald "pot holes." *Dudley*.

C. rosea, Sch. Var. *retroflexa*, Torr. Wayne Co. *Garber*.



838. *C. sparganioides*, Muhl. The plateau eastward from Penobscot ; probably at Campbell's Ledge, and elsewhere. *Dudley*.
839. *C. Muhlenbergii*, Schkuhr. Campbell's Ledge, a low form with small deltoid perigynia. *Dudley*.
840. *C. cephalophora*, Muhl. Near Falling Spring ; not infrequent in thin woods.
841. *C. echinata*, Murr. Var *cephalantha*, Bailey. Marsh east of Gouldsboro ; Moosic L. ; Lehigh Pond. *Dudley*.
C. echinata, var. *conferta*, B. Wayne Co. *Garber*.
842. *C. echinata*, var. *microstachys*, Boeck. (*C. stellulata*, var. *scirpoides*, Man., 5th ed.) Marsh east of Gouldsboro.
843. *C. canescens*, L. Near Lehigh Pond ; swamp E. of Gouldsboro ; Atherton's Pond, Dalton. *Dudley*.
C. canescens, L. Var. *alpicola*, Wahl. Near Lehigh Pond ; east of Gouldsboro ; Pocono Summit. *Dudley*. Pocono, Monroe Co. *Dr. Traill Green*. Wayne Co. *Garber*.
844. *C. trisperma*, Dewey. In all the wooded marshes visited on the Pocono. A form with less beaked perigynia and leaves setaceous near Lehigh Pond and Gouldsboro ; Ararat Marsh. *Dudley*.
845. *C. bromoides*, Schk. Tannersville, Monroe Co. *Garber*.
846. *C. Deweyana*, Schwein. Luzerne Co. (its southern limit for Pennsylvania). *Porter*.
847. *C. tribuloides*, Wahl. Var. *reducta*, Bailey. (*C. lagopodioides*, Schk. form.) E. of Gouldsboro and elsewhere. *Dudley*.
848. *C. scoparia*, Schkuhr. Frequent, especially in low places on the mountains.
849. *C. fœna*, Willd. (*C. adusta*, Man., 5th ed., the *C. argyrantha*, Tuckerm.) Archbald woods near the "pot hole ;" the river mountains, and Black Creek ; Campbell's Ledge. *Dudley*.
850. *C. fœna*, Willd. Var. *perplexa*, B. By railroad beyond Gouldsboro. *Dudley*.
851. *C. straminea*, Willd. Var. *brevior*, Dew. Near Mt. Pocono. *Dudley*.
852. *C. alata*, Torr. (*C. straminea*, var. *alata*, B.) Between Pocono Summit and Mt. Pocono. *Dudley*. Not known elsewhere in Penn. *Porter*.

102. GRAMINEÆ.

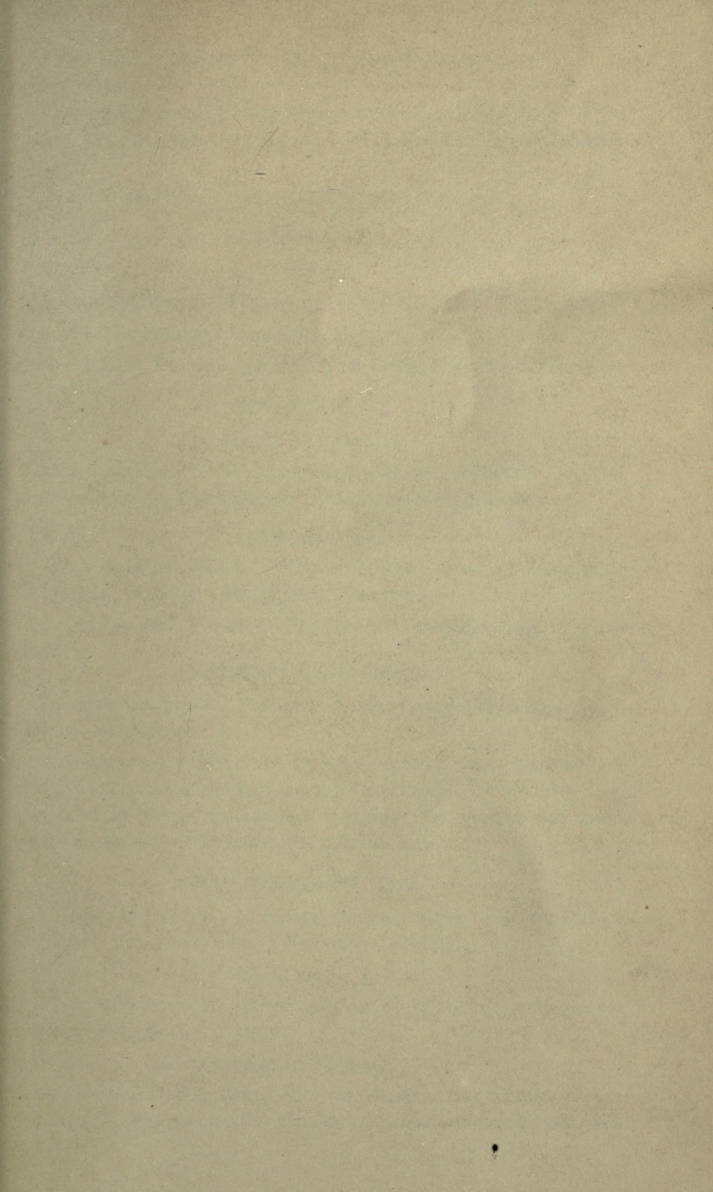
SPARTINA, SCHREB.

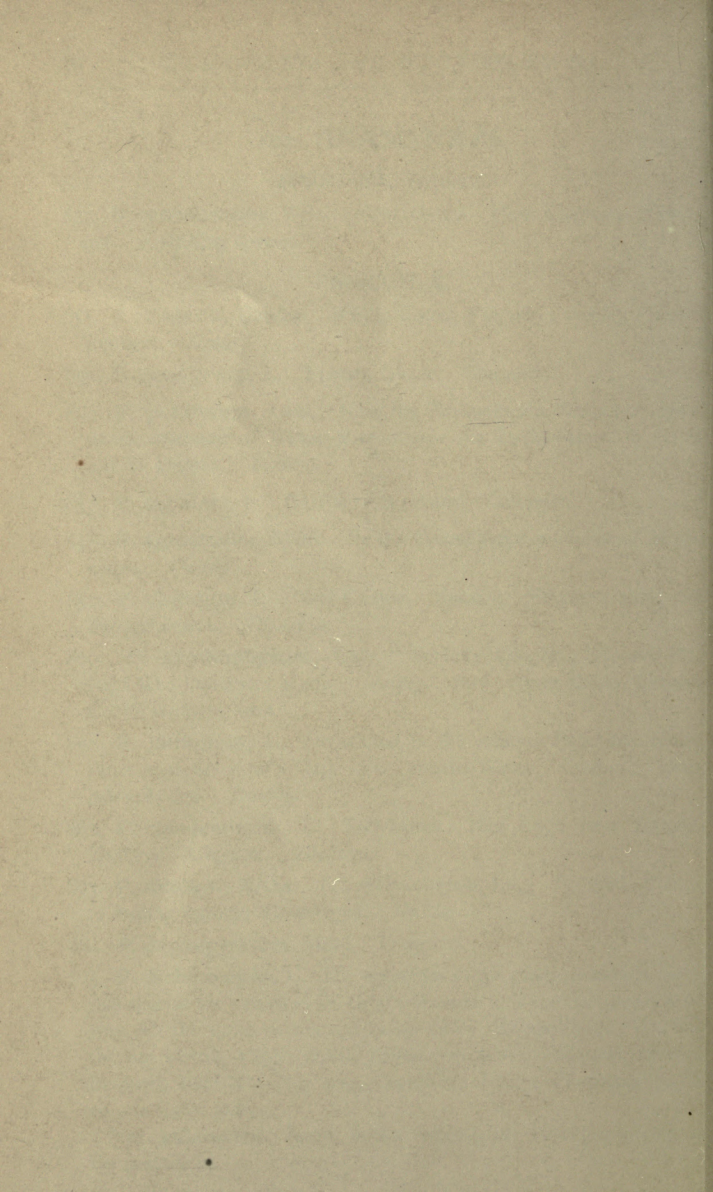
853. *S. cynosuroides*, Willd. CORD GRASS. Near Kingston. *Thurston*. A striking species.

PANICUM, L.

854. *P. GLABRUM*, Gaudin. Wilkes-Barre; Fairview; Ashley Planes; frequent. *Dudley*.
855. *P. SANGUINALE*, L. FINGER GRASS. Common.
856. *P. proliferum*, Lam. Near the Susquehanna, frequent. Near mines southeast of Wilkes-Barre; near the Lackawanna, in sandy soil, at Duryea. *Dudley*.
857. *P. capillare*, L. OLD WITCH GRASS. Common.
858. *P. agrostoides*, Muhl. By the Susquehanna southeast of Mocanaqua. *Dudley*.
859. *P. virgatum*, L. Near Coxton. *Dudley*. Frequent along the Susquehanna. *Thurston*.
860. *P. xanthophyllum*, Gray. Scarce; Elk Mt.; Moosic Mt.; Bald Mt.; Penobscot Knob. *Dudley*. Prof. Porter thinks Luzerne Co. its southern limit.
861. *P. latifolium*, L. Occasional in the valleys; Penobscot Knob, slope near Solomon's Gap. Var. *molle*, Vasey. Coxton; Campbell's Ledge. *Dudley*.
862. *P. clandestinum*, L. Tobyhanna; Nay Aug; near Duryea. *Dudley*. Kingston. *Thurston*.
863. *P. nitidum*, Michx. (*P. sphærocarpon*, Ell.) By road, Coxton to Falling Spring; Mocanaqua. *Dudley*.
864. *P. depauperatum*, Muhl. Frequent.
865. *P. dichotomum*, L. The numerous forms grouped usually under this species are classified in Gray's Manual in a rude but convenient way, all the types mentioned being easily distinguished. We find the var. *viride*, Vasey (mostly *forma gracile* of the Manual, 6th ed.), frequent, Bald Mt., Nay Aug, Campbell's Ledge, Penobscot Knob, etc., in rocky places.

Var. *pubescens*, Vasey, in the valley (near Providence) and on the mountains.





Var. **barbulatum**, Vasey, with numerous reflexed hairs at the nodes, was collected along the D., L. W. railroad east of Gouldsboro. *Dudley*.

866. **P. CRUS-GALLI**, L. BARN-YARD GRASS. Frequent.

SETARIA, BEAUV.

FOXTAIL.

867. **S. GLAUCA**, Beauv. Frequent.

868. **S. VIRIDIS**, Beauv. Frequent.

869. **S. ITALICA**, Kunth. Escaped from fields, Kingston. *Thurston*.

CENCHRUS, L.

HEDGE HOG GRASS.

870. **C. tribuloides**, L. Wyoming, near railroad. *Thurston*. A low, sand grass, its bur-like spikelets barbed with vicious spines.

LEERSIA, Swz.

871. **L. Virginica**, Willd. WHITE GRASS. Foot of Campbell's Ledge, etc. *Dudley*. Kingston. *Thurston*.

872. **L. oryzoides**, Swartz. CUT-GRASS. Frequent near stagnant water.

ANDROPOCON, ROYEN.

873. **A. furcatus**, Muhl. Penobscot Knob; Campbell's Ledge; probably not uncommon.

874. **A. scoparius**, Michx. In dry soil. A short very glaucous form occurs on the tops of the higher ledges and knobs. It should be said, also, that the Manual is incorrect in saying "the sheaths and lower leaves are hairy." They are often quite smooth.

CHRYSOPOGON, TRIN.

875. **C. nutans**, Benth. (*Sorghum nutans*, Gray.) WOOD-GRASS. Kingston. *Thurston*. Near Fairview. *Dudley*.

PHALARIS, L.

876. **P. arundinacea**, L. REED GRASS. About the mountain ponds; ponds in Wayne Co. *Dudley*.

ANTHOXANTHUM, L.

877. **A. ODORATUM**, L. SWEET VERNAL GRASS. Tobyhanna. *Porter*. Wyoming Valley, frequent. *Thurston*. It retains a delightful odor when dried.

ARISTIDA, L.

878. *A. dichotoma*, Michx. POVERTY GRASS. Sandy or gravelly soil; frequent in the valleys.

ORYZOPSIS, MICHX.

879. *O. melanocarpa*, Muhl. Mocanaqua, above Black Creek Falls. *Graves*.
 880. *O. asperifolia*, Michx. MOUNTAIN RICE. Moosic Mt. *Dudley*.
 881. *O. Canadensis*, Torr. Naomi Pines, 1889; also "N. E. Penn." *Porter*. Above Black Creek Falls; Bald Mt., 1889; Penobscot Knob. *Dudley*. Rare and near its southern limit.

MILIUM, TOURN.

882. *M. effusum*, L. Luzerne and Lackawanna counties. *Porter*.

MUHLENBERGIA, SCHREBER.

883. *M. sobolifera*, Trin. Ledges, Taylorville, Campbell's Ledge, etc. *Dudley*.
 884. *M. glomerata*, Trin. Occurring more often on the mountain tops in this vicinity instead of in "bogs." Bald Mt.; Penobscot Knob, etc. *Dudley*.
 885. *M. Mexicana*, Trin. Frequent.
 886. *M. sylvatica*, Torr. & Gray. Taylorville; Falling Spring. *Dudley*. Kingston. *Thurston*.
 887. *M. diffusa*, Schreb. NIMBLE WILL. Kingston. *Thurston*. Fairview. *Dudley*.

BRACHYELYTRUM, BEAUV.

888. *B. aristatum*, Beauv. Moosic L. *Porter*. Pocono Sta.; Fairview; Penobscot Knob. *Dudley*.

PHLEUM, L.

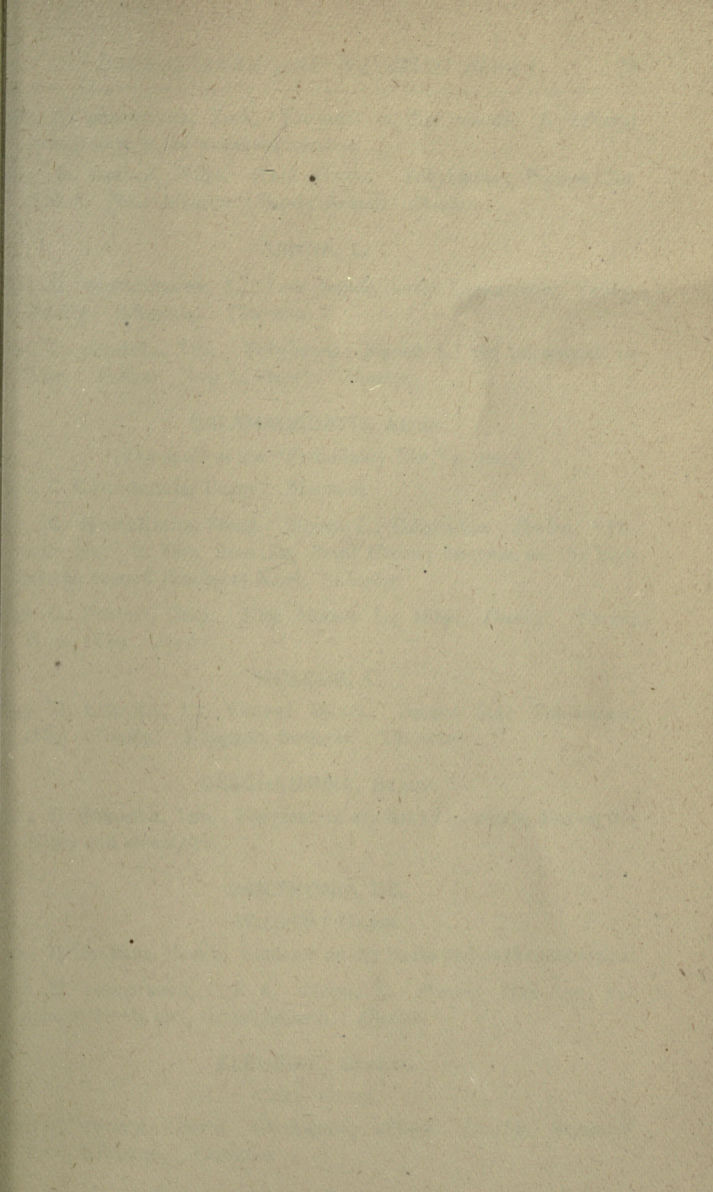
889. *P. PRATENSE*, L. TIMOTHY. Common.

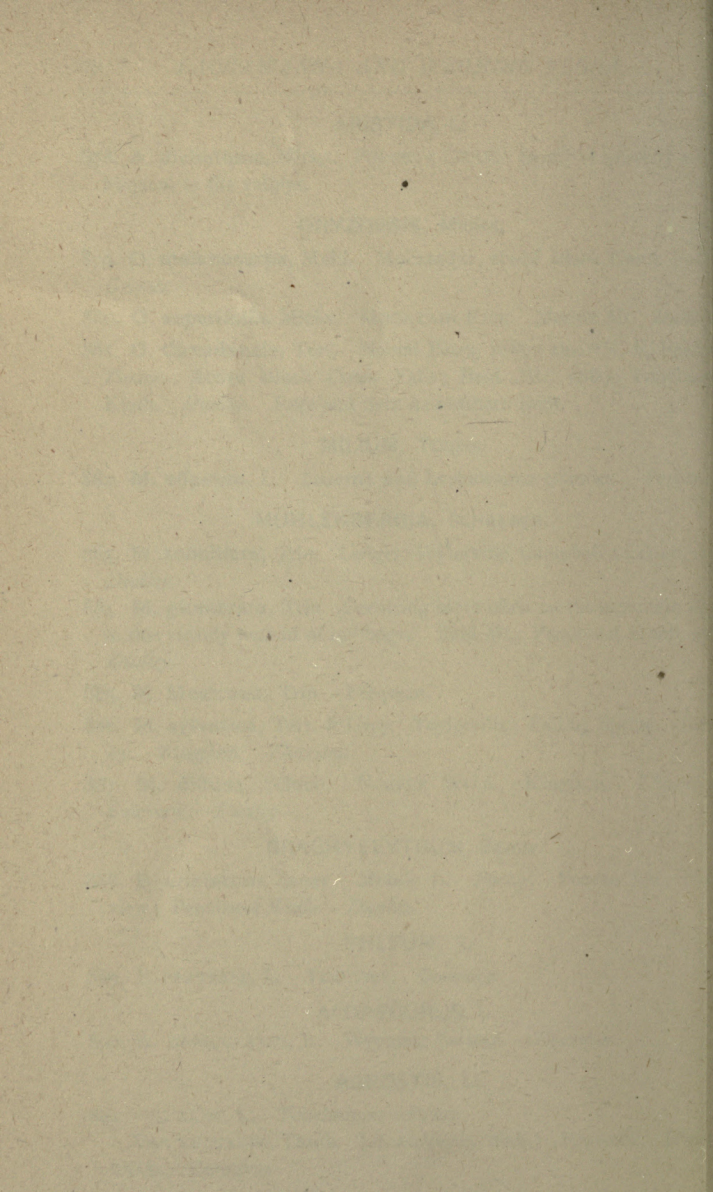
ALOPECURUS, L.

890. *A. GENICULATUS*, L. Wyoming Swamp. *Thurston*.

AGROSTIS, L.

891. *A. ALBA*, L. Tobyhanna. *Porter*.
 Var. *VULGARIS*, Thurb. (*A. vulgaris*, With.) RED-TOP. HERDS GRASS. Common.





892. *A. perennans*, Tuck. Frequent in thin woods. A delicate swamp form in the mountain marshes.

893. *A. scabra*, Willd. HAIR GRASS. Tobyhanna; Pocono Sta. *Porter*. Near Atherton's Pond; Ararat. *Dudley*.

CINNA, L.

894. *C. arundinacea*, L. Low woods, lower Lackawanna Valley. *Dudley*. Kingston. *Thurston*.

895. *C. pendula*, Trin. Tobyhanna; Moosic L.; not uncommon in Penn. *Porter*. Near L. Henry. *Dudley*.

CALAMAGROSTIS, ADANS.

(*Deyeuxia* of the "Preliminary List," p. 100.)

896. *C. Canadensis*, Beauv. Frequent.

897. *C. Nuttalliana*, Steud. Moosic L.; Tobyhanna. *Porter*. "Pocono Mt.," in herb. from Dr. Traill Green; frequent on the high plateau beyond Penobscot Knob. *Dudley*.

898. *C. Porteri*, Gray. Near Moosic L., 1886. *Dudley*. Naomi Pines, 1889. *Porter*.

HOLCUS, L.

899. *H. LANATUS*, L. VELVET GRASS. Pocono Sta.; Tobyhanna, 1887. *Dudley*. Kingston, frequent. *Thurston*.

DESCHAMPSIA, BEAUV.

900. *D. flexuosa*, Trin. Frequent on dry banks in woods, also on the ledges and mountains.

DANTHONIA, DC.

WILD OAT GRASS.

901. *D. spicata*, Beauv. Common on dry banks and on the mountains.

902. *D. compressa*, C. F. A. Moosic L. *Porter*. Nay Aug; Penobscot Knob, etc., not uncommon. *Dudley*.

ELEUSINE, GAERTN.

CRAB GRASS.

903. *E. INDICA*, Gaertn. Shickshinny village. *Dudley*. Seminary Yard, Kingston. *Thurston*.

TRIODIA, R. BR.

904. *T. cuprea*, Jacq. TALL RED TOP. By road, Coxton to Falling Spring. *Dudley*.

KÖELERIA, PERS.

905. *K. cristata*, Pers. Top of Campbell's Ledge; on the river mountains above Mocanaqua, 1886. *Dudley* Prof. Porter writes concerning this species: "It is credited to Pennsylvania in Gray's Manual, but these are the first specimens I have seen from our State."

EATONIA, RAF.

906. *E. Dudleyi*, Vasey. Woods near Archbald "pot-hole;" Campbell's Ledge. *Dudley*.

ERAGROSTIS, BEAUV.

907. *E. reptans*, Nees. Along the Susquehanna.
908. *E. MAJOR*, Host. Flats near the Susquehanna below Forty Fort. *Dudley*.

DACTYLIS, L.

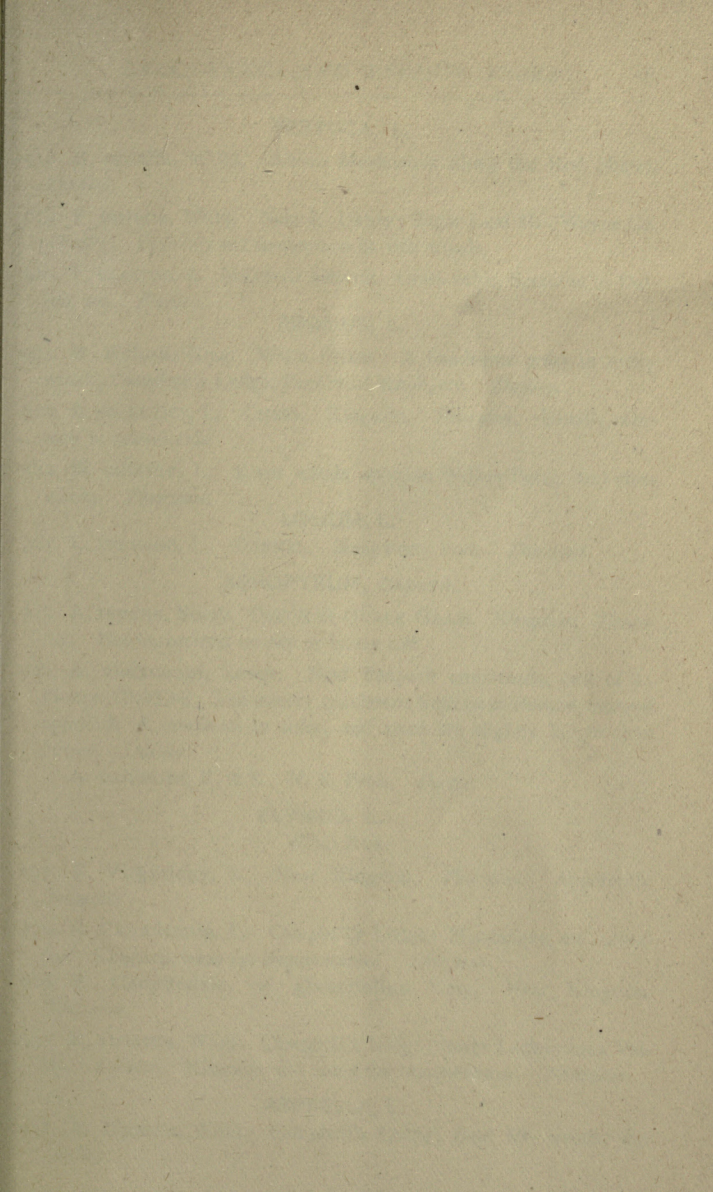
909. *D. GLOMERATA*, L. ORCHARD GRASS. Common. *Thurston*.

POA, L.

910. *P. ANNUA*, L. SPEAR-GRASS. Frequent near dwellings in Wyoming Valley. *Thurston*.
911. *P. COMPRESSA*, L. WIRE GRASS. ENGLISH BLUE GRASS. Dry places and mountain tops; Penobscot Knob; Bald Mt.; Campbell's Ledge. *Dudley*.
912. *P. pratensis*, L. KENTUCKY BLUE GRASS. Frequent.
913. *P. debilis*, Torr. First discovered in Penn. near Naomi Pines, 1889. *Porter*.

GLYCERIA, R. BR.

914. *G. Canadensis*, Trin. RATTLESNAKE GRASS. Near all ponds and marshes visited on the mountains. *Dudley*. Wyoming Sw. *Thurston*.
915. *G. elongata*, Trin. Little Roaring Brook; Pocono Summit; L. Henry; E. of Penobscot Knob. *Dudley*.
916. *G. nervata*, Trin. FOWL MEADOW-GRASS. Near Mocanaqua; east of Gouldsboro; L. Henry. *Dudley*.
917. *G. grandis*, Watson. (*G. aquatica*, Amer. Authors.) Gouldsboro; L. Henry. *Dudley*. Kingston. *Thurston*.



FESTUCA, L.

918. *F. tenella*, Willd. Above Mocanaqua along the Red Shales. *Dudley*.
919. *F. nutans*, Willd. Near L. Henry; Sugar Loaf Mt., Wayne Co. *Dudley*. Probably not uncommon in rich woods.
920. *F. ELATIOR*, L. MEADOW FESCUE. Grass fields, Scranton to Dalton, etc. *Dudley*.

BROMUS, L.

921. *B. Kalmii*, Gray. WILD CHESSE. A handsome grass in rocky woods, Campbell's Ledge, Penobscot Knob, etc. *Dudley*.
922. *B. SECALINUS*, L. CHESSE. Kingston. *Thurston*. Usually common in grain-fields.
923. *B. ciliatus*, L. River woods opposite Wilkes-Barre, and elsewhere. *Thurston*.

LOLIUM, L.

924. *L. PERENNE*, L. DARNEL. Near Forty Fort. *Thurston*.

AGROPYRUM, GAERTN.

925. *A. repens*, Beauv. COUCH or QUACK GRASS. Kingston. *Thurston*. Not uncommon on dry or loamy soil.
926. *A. violaceum*, Lange. Near Paupack cross-roads, east of L. Henry; Bald Mt.; Penobscot; specimens from near Pocono Summit approach *A. caninum* in color, and awns are slightly longer than flower. *Dudley*.
- A. caninum*, R. & S. N. E. Penn. *Porter*.

ELYMUS, L.

WILD RYE.

927. *E. Virginicus*, L. Near Kingston. *Thurston*. Apparently frequent.
928. *E. Canadensis*, L. Campbell's Ledge; Mocanaqua, etc. *Dudley*. Kingston, near the Susquehanna. *Thurston*.
929. *E. Canadensis*, var. *glaucifolius*, Gray. Near Kingston. *Thurston*.
930. *E. striatus*, Willd. Campbell's Ledge; lower Lackawanna Valley. *Dudley*. Kingston and along the Susquehanna. *Thurston*.

ASPRELLA, L.

931. *A. Hystrix*, Willd. Campbell's Ledge; Bald Mt. woods, etc. *Dudley*.

CRYPTOGAMS.

103. EQUISETACEÆ.

EQUISETUM, L.

932. *E. arvense*, L. COMMON HORSETAIL. Common in gravelly soil in valley bottoms.
933. *E. limosum*, L. Near Pocono Station. *Prof. Porter*. At Dunn's Pond, Wayne Co. *Dudley*.
934. *E. hyemale*, L. SCOURING RUSH. Occasional. Tompkinsville. *Graves*. Abundant in grove by the river above Kingston. *Thurston*.

104. FILICES.

POLYPODIUM, L.

935. *P. vulgare*, L. POLYPODY. Common on rocks.

ADIANTUM, L.

936. *A. pedatum*, L. MAIDEN-HAIR FERN In moist woods, common.

PTERIS, L.

937. *P. aquilina*, L. COMMON BRAKE. Common.

PELLÆA, LINK.

938. *P. atropurpurea*, Link. CLIFF-BRAKE. Sandstone ledges above Taylorville; Elk Mt.; Campbell's Ledge, in herb. *Dudley*.

ASPLENIUM, L.

939. *A. Trichomanes*, L. Frequent on rocks.
940. *A. ebeneum*, Ait. Frequent, on nearly every cliff.
941. *A. montanum*, Willd. MOUNTAIN SPLEENWORT. On the southern cliffs on Bald Mountain Summit; cliff at falls of Black River. It is not found further north than the Shawangunk Mts. in New York. *Dudley*.

This has been found in Pennsylvania only on the Susquehanna below Harrisburg, on the Delaware at Easton, and at Glen Onoko, on the Lehigh. *Prof. Porter*, 1886.

942. *A. thelypteroides*, Michx. In Mr. Davis' herb., who thinks it came from the two valleys.

943. *A. Filix-fœmina*, Bernh. LADY FERN. Frequent in ravines, etc.

CAMPTOSORUS, LINK.

944. *C. rhizophyllus*, Link. WALKING FERN. I have found this fern in every piece of woods near Tompkinsville. *Graves*. *Lynn*. *Davis*. Cliffs above Luzerne. *Thurston*. Ledges above Taylorville; Campbell's Ledge; by R. R. above Mocanaqua, on the conglomerate, where the fronds are strongly auricled at the base, in herb. *Lack*. *Inst*. *Dudley*.

PHEGopteris, Fee.

945. *P. polypodioides*, Fee. BEECH FERN. Rather common.

946. *H. hexagonoptera*, Fee. Elk Mt.; Scott township road. *Dudley*.

947. *P. Dryopteris*, Fee. Archbald near the "pot-holes." *Dudley*.
White Oak Glen. *Davis*. Glen above Luzerne. *Thurston*.

ASPIDIUM, SWARTZ.

948. *A. Noveboracense*, Swz. Moosic and Bald Mountain woods; Mountain Inn road, and elsewhere. *Dudley*.

949. *A. Thelypteris*, Swz. Scott township road; above Nay Aug, etc. *Dudley*.

950. *A. spinulosum*, Swz. (type form). Swamps near the head of Little Roaring Brook; W. of Tobyhanna. *Dudley*.

Var. *intermedium*, Eaton. Frequent.

Var. *dilatatum*, Hook. Near Tobyhanna. *Prof. Porter*. On Ararat Mt.; Sugar Loaf Mt., Wayne Co., abundant. *Dudley*.

951. *A. cristatum*, Swz. Tobyhanna. *Porter*. Atherton's Pond; Pocono Summit; Lehigh Pond. *Dudley*. Swamp north of Kingston. *Thurston*.

952. *A. marginale*, Swz. Frequent.

953. *A. acrostichoides*, Swz. CHRISTMAS FERN. Mountain woods and ravines.

A. aculeatum, Swz. Var. *Braunii*, Koch. In a rocky glen in the S. E. part of Sullivan Co. which adjoins Luzerne Co., by J. P. C. Griffith, 1878. This is the southernmost locality in America for this fern, elevation about 2000 feet. It occurs in the Stony Clove Catskill Mts. and from Northern New England north and west. *Dudley*.

CYSTOPTERIS, BERNHARDI.

954. *C. fragilis*, Bernh. Elk Mountain; sandstone above Taylorville; probably frequent. *Dudley*.

ONOCLEA, L.

955. *O. sensibilis*, L. SENSITIVE FERN. Common in low grounds; the form *obtusilobata* is in Mr. Davis' herbarium as "very rare." *Dudley*.
956. *O. Struthiopteris*, Hoffman. (*Struthiopteris Germanica*, Willd. Above Nay Aug. *Dudley*.

WOODSIA, R. BROWN.

957. *W. Ilvensis*, R. Br. Not rare on the cliffs.
958. *W. obtusa*, Torr. Elk Mt.; Campbell's Ledge; Mocanaqua. *Dudley*.

DICKSONIA, L. HER.

959. *D. pilosiuscula*, Willd. Common on newly cleared slopes, etc. [*Lygodium palmatum*, Swartz, *Climbing Fern*, should be looked for. It is said to occur at Mauch Chunk and Glen Onoko. *Dudley*.]

OSMUNDA, L.

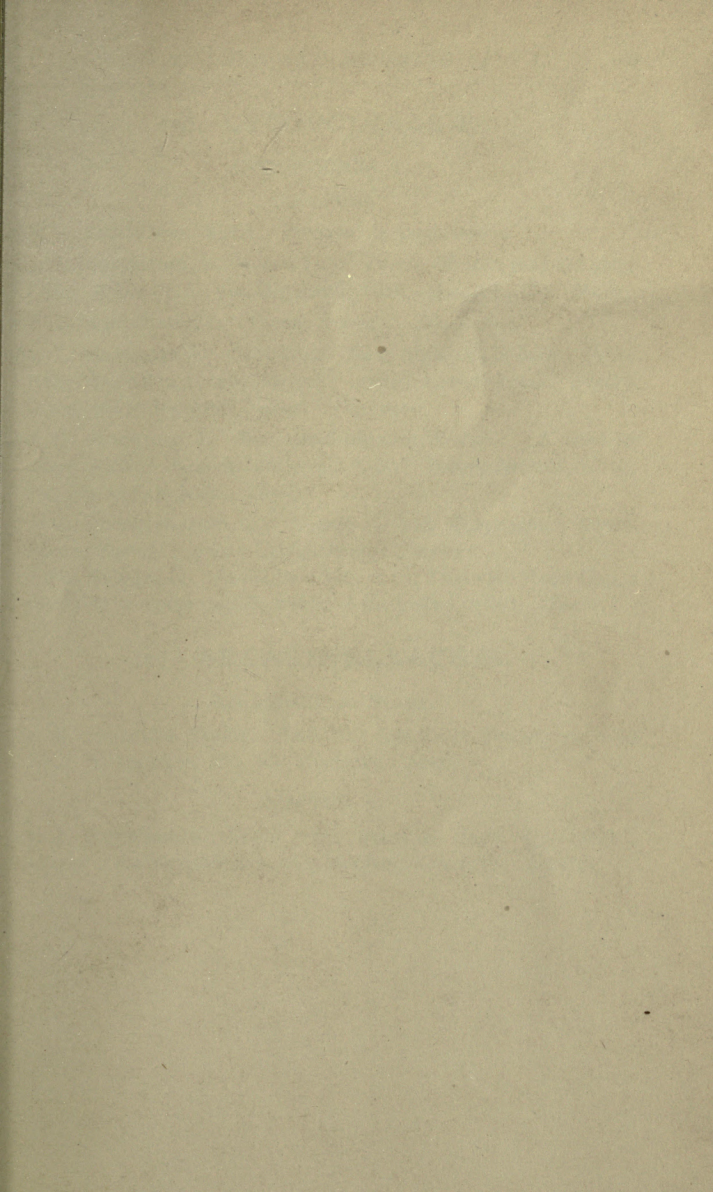
960. *O. regalis*, L. ROYAL FLOWERING FERN. Toward head of Little Roaring Brook; near stream at Gouldsboro. Var. *interrupta*, Milde. At Gouldsboro, July, 1889, the upper pinnae partly sterile. *Dudley*. Near Plainsville church, in herb. *Davis*.
961. *O. Claytoniana*, L. Toward the source of Little Roaring Brook, etc. *Dudley*. Above Luzerne. *Thurston*.
962. *O. cinnamomea*, L. CINNAMON FERN. Moosic Mt.; Duryea; Taylorville marsh, etc. *Dudley*. Near Kingston. *Thurston*.

105. OPHIOGLOSSACEÆ.

BOTRYCHIUM, Swz.

963. *B. simplex*, Hitch. First found in Penn'a at Naomi Pines, June, '89. *Prof. Porter*.
964. *B. ternatum*, var. *obliquum*, Eaton. Near Waymart. *Dudley*. Near Mayfield, rare. *Davis*.
965. *B. Virginicum*, Swz. GRAPE FERN. Frequent in woods.

According to Prof. Porter *Botrychium lanceolatum* and *matricariaefolium* occur in N. E. Penn'a, they have not been seen within limits.



106. LYCOPODIACEÆ.

LYCOPODIUM, L.

CLUB-MOSS.

966. *L. lucidulum*, Michx. Frequent in damp woods.
967. *L. inundatum*, L. Moosic Lake. *Porter*. By tram road to Lehigh Pond. *Willie Peck*. Var. *Bigelovii*, Tuck. Moosic L., '89. *Dudley*.
968. *L. annotinum*, L. Pocono Summit. *Mr. Reeves*.
969. *L. clavatum*, L. CLUB-MOSS. Near Archbald, in herb. *Davis*. Near Waymart; Pocono Summit; toward Lehigh Pond. *Dudley*. Occasional in Wyoming Valley. *Thurston*.
970. *L. obscurum*, L. Var. *dendroideum*, Watson. (*L. dendroideum*, Michx.) Near Archbald "pot hole;" Pocono Summit; Mountain Inn road, in herb. *Dudley*.
971. *L. complanatum*, L. Moosic L. and Tobyhanna. *Porter*. Pocono Summit; toward Lehigh Pond. *Dudley*.
[*L. Selago*, L. On the Blue Mts. at the Delaware Water Gap, a subalpine or alpine species, a relic of the glacial period. *Porter*.]

107. SELAGINELLACEÆ.

SELAGINELLA, BEAUV.

972. *S. rupestris*, Spring. Bald Mt.; Campbell's Ledge; rocks on Little Wilkes-Barre Mt.; Elk Mountain. *Dudley*.

ISOETES, L.

973. *I. Engelmanni*, Braun. Var. *gracilis*, Engl. QUILLWORT. Shores of the Susquehanna, near Mocanaqua, in herb. *Dudley*.

ON LYSOPHACIA

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ON SELACHINELLA

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INDEX

To Orders, Genera and Common Names.

PREPARED BY MRS. C. O. THURSTON.

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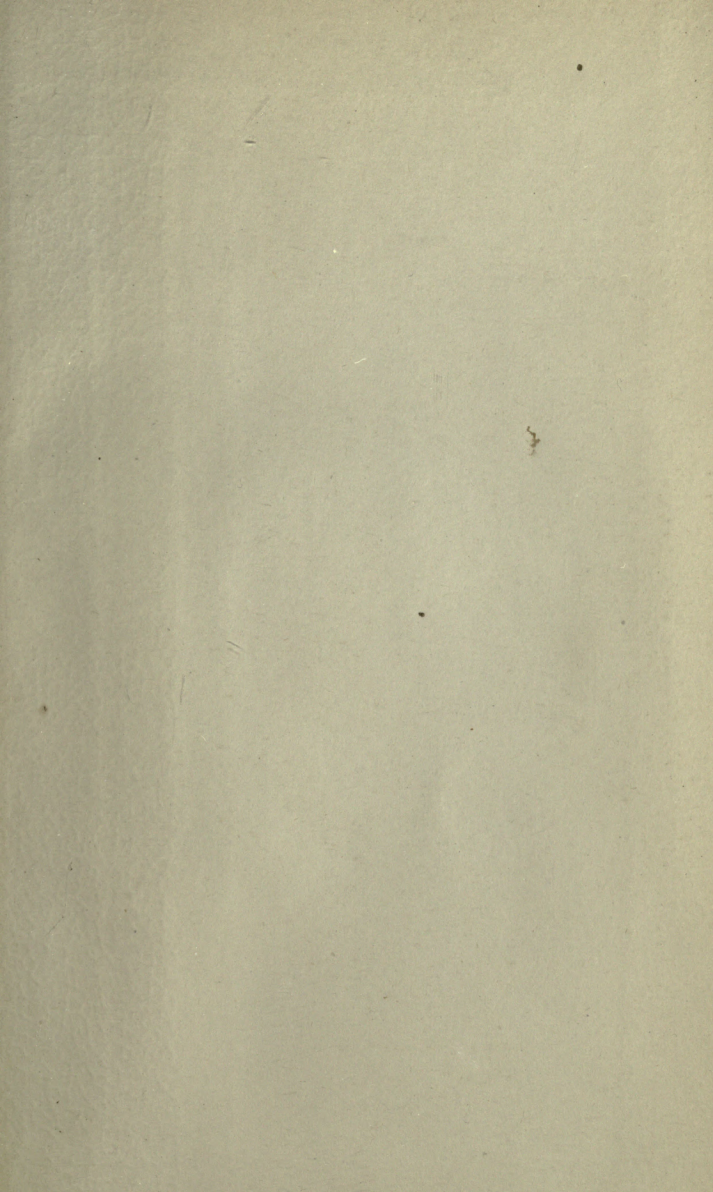
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